1986-1987

Optoelectronics

Short Form

New Products:

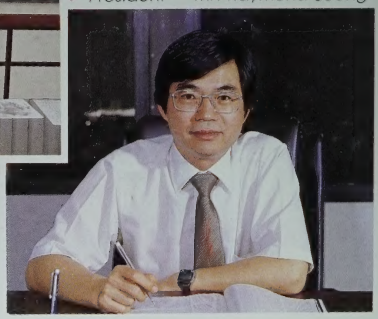
- Infrared Products
- Ultra Bright LED
- Surface Mount LED
- Integral Display
- Numeric Display with Driver IC Built In.

TAIWAN LITON ELECTRONIC CO., LTD.
TAIWAN LITON ELECTRONIC CO., (H.K.) LTD.
LITE-ON CORPORATION (U.S.A.)

Liton Today

▲ *Chairman of the Board — Mr. Eric Cheng*

▼ *President — Mr. Raymond Soong*



Taiwan Liton Electronic Co., Ltd. was established in 1975 to produce LED indicator lamps, single, dual and multi-digit displays, clock displays, traffic lights displays, infrared LED, Photodiode, phototransistor, hybrid modules and other customer-designed products. In the intervening years, not only has the company developed its own automatic production process but it has also designed and fabricated most of the equipment used in production and testing.

The first automatic factory opened in the fall of 1982. A second one is now under construction, and will be completed by 1985.

Because of automation in production and improvement in manufacturing process, Liton is switching its QC system from AQL to PPM. This switch-over will be completed before the end of 1986. What this means for you is high-quality LED products with on-schedule deliveries. A thorough understanding and total control of the production process assure high quality. And reliable people with good management assure the best services for you. We believe Liton is the right supplier which you are looking for.

A product means little without a strong sales team to back it up and Liton shines here too. Liton has agents or distributors in nearly every other country in the world. This means you can purchase Liton products nearly every-where in the world from a reliable supplier you can trust.

Liton now employs 800 people with space over 147,600 ft^2, and paid in capital over US$ 8,900,000. Its estimated sales of 1985 is US$30,000,000.

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& L/C Address Taipei, Taiwan, R.O.C.
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Fax No. : (02) 751-1962
Banks : 1) CITI Bank, Taipei Branch
2) First Commercial Bank, Cheng Tung Branch.

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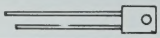
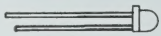
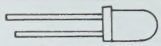
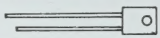
Infrared Products

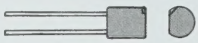
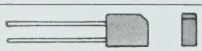
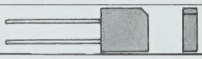
Infrared-Emitting diodes

Package	Drawing Outline	Size mm (inch)	Package Dimensions	Part Number
T-1 Modified 0.5" Lead 3ϕ		3.0 (0.118)	1 See Page 4	LTE-209
				LTE-209C
				LTE-239
				LTE-239C
T-1¾ Standard 0.5" Lead 5ϕ		5.0 (0.197)	2 See Page 4	LTE-4208
				LTE-4208C
				LTE-4238
				LTE-4238C
				LTE-5208
				LTE-5208C
			10 See Page 5	LTE-5238
				LTE-5238C
Side Look		2.0×5.0 (0.079×0.197)	3 See Page 4	LTE-301

Phototransistors

Package	Drawing Outline	Size mm (inch)	Package Dimensions	Part Number
T-1 Low Profile 3ϕ		3.0 (0.118)	4 See Page 4	LTR-206
				LTR-206C
T-1 Standard 3ϕ		3.0 (0.118)	1 See Page 4	LTR-209
T-1¾ Standard 5ϕ		5.0 (0.197)	11 See Page 5	LTR-4208
Side Look		2.0×5.0 (0.079×0.197)	3 See Page 4	LTR-301

Photodiodes

Package	Drawing Outline	Size mm (inch)	Package Dimensions	Part Number
Black Plastic		5.0×6.6 (0.2×0.26)	5 See Page 5	LTR-516AB
			6 See Page 5	LTR-526AB
		5.2×7.5 (0.2×0.3)	7 See Page 5	LTR-536AB
		7.0×7.6 (0.28×0.3)	8 See Page 5	LTR-546AB

Transmissive Switch

Package	Drawing Outline	Size mm (inch)	Package Dimensions	Part Number
Housing Package		6.4×12.84 (0.252×0.506)	9 See Page 5	LTH-301

Lens Color	Peak Emission Wavelength (nm)	Typical Viewing (deg.)	Electrical and Optical Characteristics (T_A=25°C)						
			V_R			I_R (μA)		Aperture Radiant Incidance	
			Typ	Max.	I_F (mA)	Max.	V_R (V)	(mw/cm^2)Typ	I_F (mA)
Water Clear	940	16	1.2	1.6	20	100	5	0.3	20
Smoke	940	16	1.2	1.6	20	100	5	0.23	20
Water Clear	880	16	1.3	1.8	20	100	5	0.6	20
Smoke	880	16	1.3	1.8	20	100	5	0.5	20
Water Clear	940	20	1.2	1.6	20	100	5	1.4	20
Smoke	940	20	1.2	1.6	20	100	5	1.0	20
Water Clear	880	20	1.3	1.8	20	100	5	2.0	20
Smoke	880	20	1.3	1.8	20	100	5	2.0	20
Water Clear	940	40	1.2	1.6	20	100	5	0.7	20
Smoke	940	40	1.2	1.6	20	100	5	0.6	20
Water Clear	880	40	1.3	1.8	20	100	5	1.2	20
Smoke	880	40	1.3	1.8	20	100	5	1.2	20
Clear	940	40	1.2	1.6	20	100	5	0.15	20

Lens Color	Electrical and Optical Characteristics (T_A=25°C)												
	V_{CEO}(V)		V_{ECO}(V)		V_{CE}(sat) V			I_{CEO} (nA)			I_C (ON) mA		
	Min.	I_C (mA)	Min.	I_E (μA)	Max.	I_C (mA)	E_e(mw/cm^2)	Max.	V_{CE}(V)	E_e(mw/cm^2)	Typ	V_{CE}(V)	E_e(mw/cm^2)
Water Clear	30	1	5	100	0.4	0.5	20	100	10	0	0.5	5	1
Smoke	30	1	5	100	0.4	0.5	20	100	10	0	0.6	5	1
Water Clear	30	1	5	100	0.4	0.5	20	100	10	0	4	5	1
Water Clear	30	1	5	100	0.4	0.5	20	100	10	0	4	5	1
Clear	30	1	5	100	0.4	0.5	20	100	10	0	1.5	5	1

Lens Color	Electrical and Optical Characteristics (T_A=25°C)											
	Wabelength of the Max Sensitivity	$V_{(BR)R}$ (V)		I_D(R) (nA)			V_{OC} (V)			I_S (μA)		
		Min.	I_R (μA)	Max.	V_R	E(mw/cm^2)	Typ	λ	E(mw/cm^2)	Typ	V_R	E(mw/cm^2)
Black	950	30	100	30	10	0	350	940	0.5	2	5	0.05
Black	950	30	100	30	10	0	350	940	0.5	2	5	0.05
Black	950	30	100	30	10	0	350	940	0.5	2	5	0.05
Black	950	30	100	30	10	0	350	940	0.5	2	5	0.05

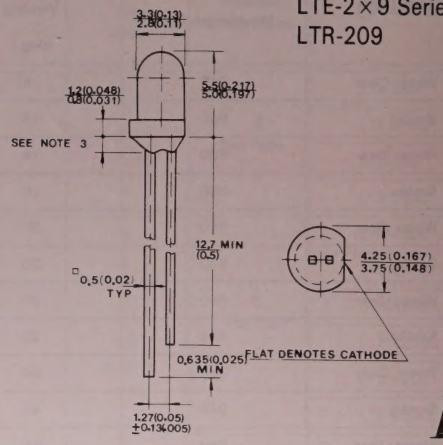
Package Color	Electrical and Optical Characteristics (T_A=25°C)										
	IRED V_F (V)		IRED I_R (μA)		Sensor V_{BR} IRED (V)		Sensor V_{ECO} (V)		I_C (μA)		
	Max.	I_F (mA)	Min.	V_R(V)	Min.	Ie (mA)	Min.	Ie (μA)	Min.	I_F (mA)	V_{CE} (V)
Black	1.6	20	100	5	30	1	5	100	500	20	5

Package Dimensions

Note:

1. All dimensions are in millimeters (inches).
2. Lead spacing is measured where the leads emerge from the package.
3. Protruded resin under flange 1.5mm (0.059") MAX.
4. Specifications Subject To Change Without Notice.

LTE-2×9 Series
LTR-209



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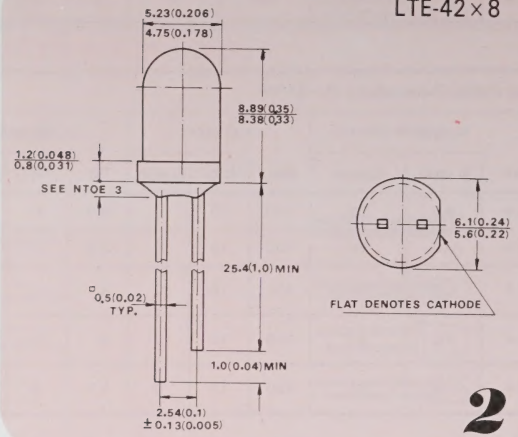
LTE-42×8



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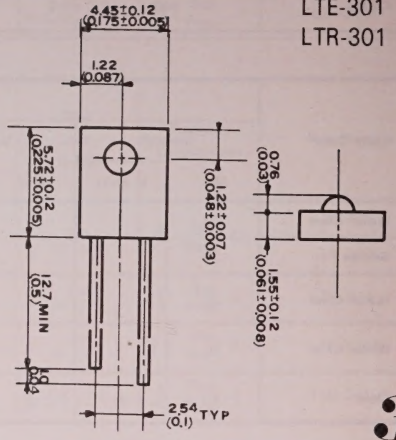
LTE-301
LTR-301



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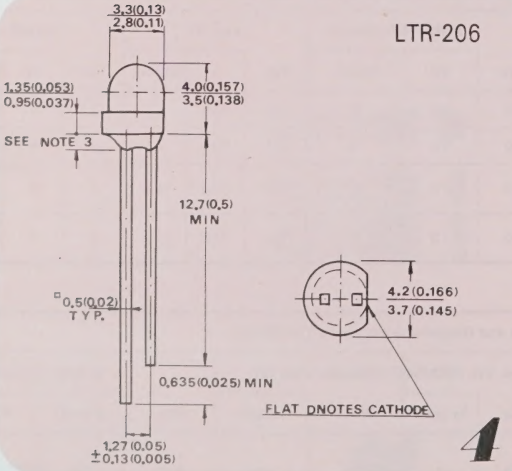
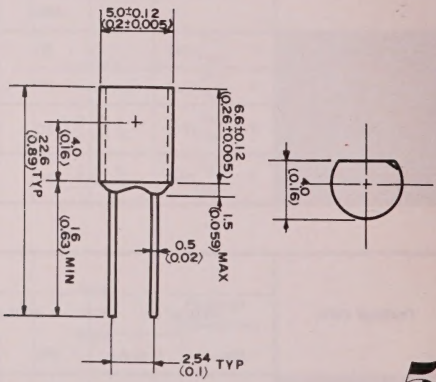
LTR-206



4

LTR-516AB



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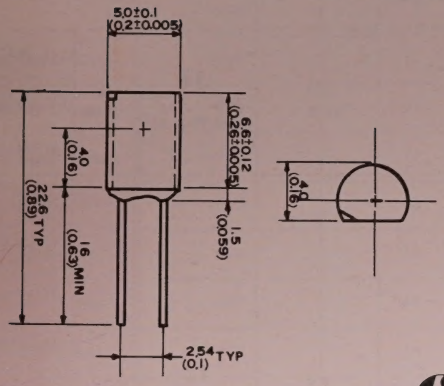
LTR-526AB



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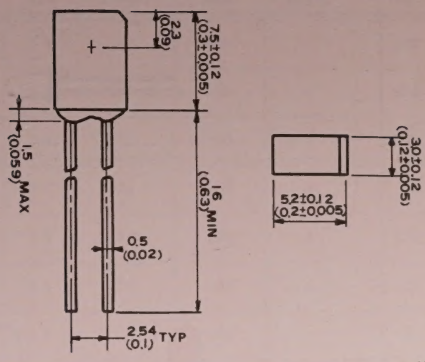
LTR-536AB



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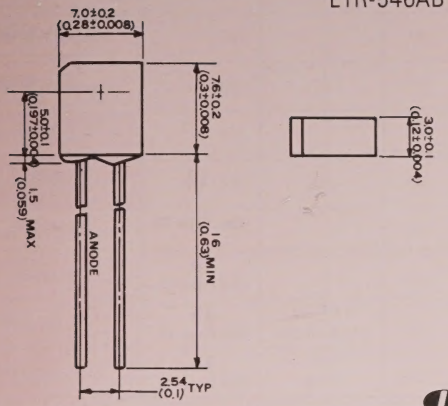
LTR-546AB



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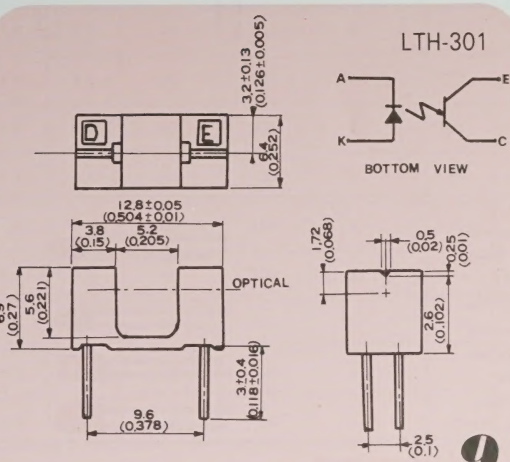
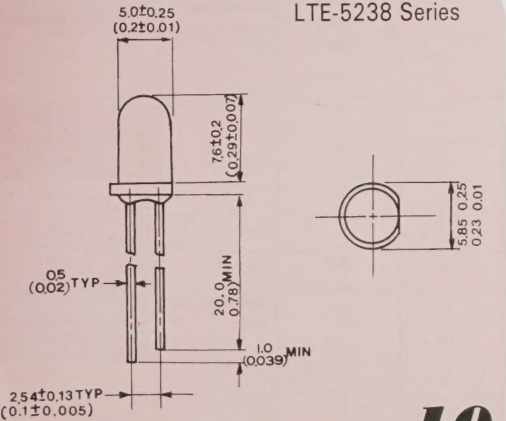
LTH-301



9

LTE-5238 Series



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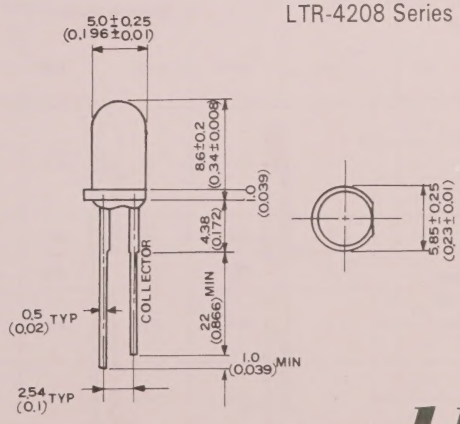
LTR-4208 Series



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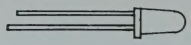
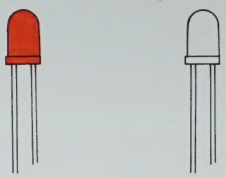
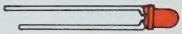
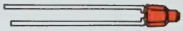
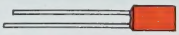
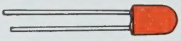
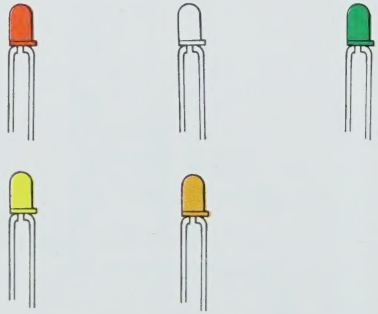
Ultra Bright LED Lamps

Package	Drawing Outline	Size mm (inch)	Package Dimension	Part Number	
		5.0 (0.197)	**11** See Page 21	LTL-283CK	LTL-283CKL1
					LTL-283CKL2
					LTL-283CKH3
T-1¾ Standard 0.5"Lead 5 ϕ		5.0 (0.197)	**12** See Page 22	LTL-4263	
				LTL-4264	LTL-4264H4
					LTL-4264H3
					LTL-4264L2
					LTL-4264L1
				LTL-4268	LTL-4268H4
					LTL-4268H3
					LTL-4268L2
					LTL-4268L1
				LTL-5163	
T-1 Standard 0.5"Lead 3 ϕ		2.93 (0.105)	**13** See Page 22	LTL-4262N	
				LTL-4266N	
Panel Dot indicators			**14** See Page 12	LTL-1262A	
indicators Bar		4.0×7.0 (0.16×0.28)	**15** See Page 12	LTL-3262WC	
Medium Profile 4.6 ϕ		4.75 (0.78)	**16** See Page 12	LTL-10263W	

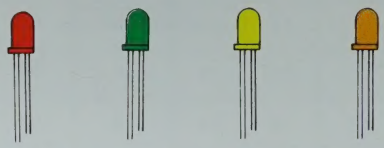
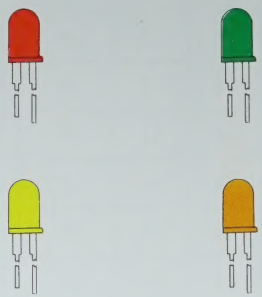
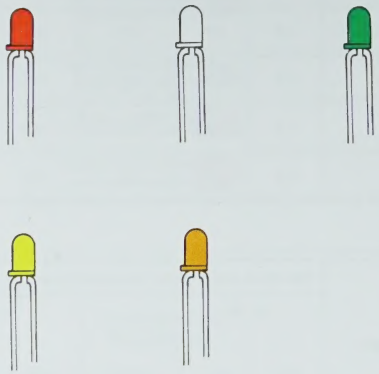
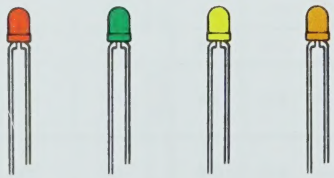
LED Lamps

Package	Drawing Outline (Actual Size)	Size mm (inch)	Package Dimensions	Part Number
T-1 Standard 0.5" Lead 3ϕ		3.0 (0.118)	**1** See Page 20	LTL-201
				LTL-202
				LTL-205
				LTL-211
				LTL-221
				LTL-231
				LTL-232
				LTL-251
				LTL-252
				LTL-291

Lens Color	Peak Emission Wavelength (nm)	Typical Viewing Angle (deg.)	Electrical and Optical Characteristics (T_A = 25°C)						
			V_F (V)			I_R (μA)		Luminous Intensity (mcd)	
			Typ	Max	I_F (mA)	Max	V_R (V)	Typ	I_F (mA)
Clear non Diffused	660	12	1.8	2.4	20	100	4	300	20
Clear non Diffused	660	12	1.8	2.4	20	100	4	500	20
Clear non Diffused	660	12	1.8	2.4	20	100	4	1000	20
Red Diffused	660	40	1.8	2.4	20	100	4	72	20
Red non Diffused	660	16	1.8	2.4	20	100	4	270	20
Red non Diffused	660	16	1.8	2.4	20	100	4	220	20
Red non Diffused	660	16	1.8	2.4	20	100	4	150	20
Red non Diffused	660	16	1.8	2.4	20	100	4	100	20
Clear non Diffused	660	16	1.8	2.4	20	100	4	270	20
Clear non Diffused	660	16	1.8	2.4	20	100	4	220	20
Clear non Diffused	660	16	1.8	2.4	20	100	4	150	20
Clear non Diffused	660	16	1.8	2.4	20	100	4	100	20
Red Diffused	660	58	1.8	2.4	20	100	4	26	20
Red non Diffused	660	76	1.8	2.4	20	100	4	18	20
Clear non Diffused	660	76	1.8	2.4	20	100	4	20	20
Red Diffused	660	120	1.8	2.4	20	100	4	5	20
Red Diffused	660	100	1.8	2.4	20	100	4	12	20
Red Diffused	660	48	1.8	2.4	20	100	4	34	20

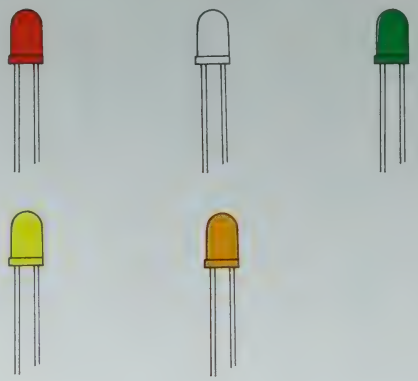
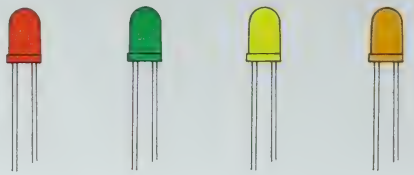
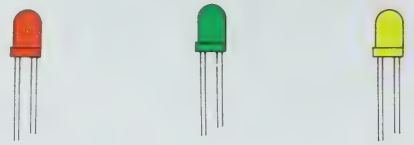
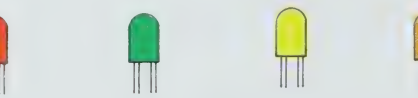
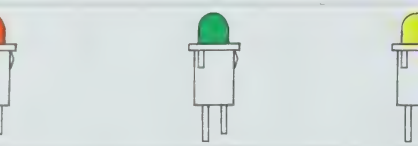
Lens Color	Peak Emisson Wave length (nm)	Typical Viewing Angle (deg.)	Electrical and Optical Characteristics (T_A = 25° C)						
			V_F (V)			I_R (μA)		Luminous Intensity (mcd)	
			Typ	Max	I_F (mA)	Max	V_R (V)	Typ	I_F (mA)
Red Diffused	655	76	1.7	2.0	20	100	5	0.8	10
Red Transparent		30						2.0	
White Diffused		76						0.8	
Red Diffused	697	76	2.1	2.8	20	100	5	1.0	10
Red Diffused	635	76	2.0	2.8	20	100	5	3.5	10
Green Diffused	565	76	2.2	2.8	20	100	5	5.5	10
Green Transparent		30						8.0	
Yellow Diffused	585	76	2.2	2.8	20	100	5	2.5	10
Yellow Transparent		30						8.0	
Orange Diffused	635	76	2.0	2.8	20	100	5	3.5	10

LED Lamps

Package	Drawing Outline (Actual Size)	Size mm (inch)	Package Dimensions	Part Number
T-1 Standard 0.5" Lead 3ϕ		3.0 (0.118)	2 See Page 20	LTL-209 LTL-219 LTL-229 LTL-239 LTL-259 LTL-299
T-1¾ Standard 05" Lead 5ϕ		5.0 (0.197)	3 See page 20	LTL-203 LTL-204 LTL-213 LTL-223 LTL-224 LTL-233 LTL-234 LTL-253 LTL-254 LTL-293 LTL-294
T-1 Standard 1" Lead, High Performance 3ϕ		3.0 (0.118)	4 See Page 20	LTL-4201 LTL-4202 LTL-4206 LTL-4211 LTL-4221 LTL-4222 LTL-4231 LTL-4232 LTL-4251 LTL-4252 LTL-4291 LTL-4292 LTL-4296
T-1 Standard 1" Lead, High Performance 3ϕ		3.0 (0.125)	5 See Page 20	LTL-4201N LTL-4202N LTL-4211N LTL-4221N LTL-4222N LTL-4231N LTL-4232N LTL-4251N LTL-4252N LTL-4291N LTL-4292N

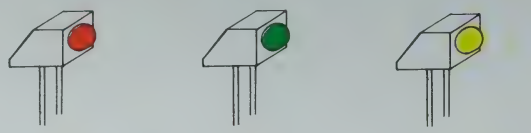
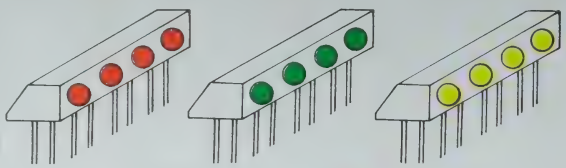
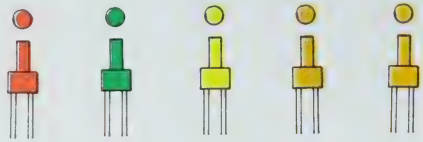
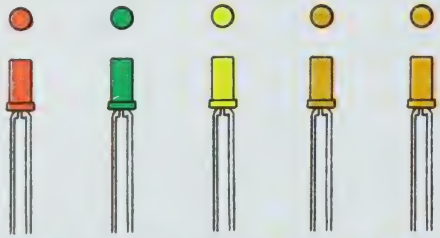
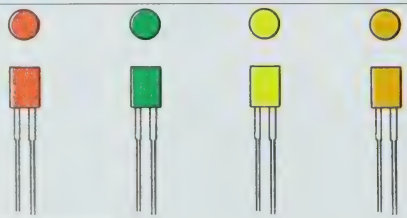
Lens Color	Peak Emisson Wave length (nm)	Typical Viewing Angle (deg.)	Electrical and Optical Characteristics (T_A=25°C)						
			V_F (V)			I_R (μA)		Luminous Intensity (mcd)	
			Typ	Max	I_F (mA)	Max	V_R (V)	Typ	I_F (mA)
Red Diffused	655	72	1.7	2.0	20	100	5	0.8	10
Red Diffused	697	72	2.1	2.8	20	100	5	1.0	10
Red Diffused	635	72	2.0	2.8	20	100	5	3.5	10
Green Diffused	565	72	2.2	2.8	20	100	5	3.5	10
Yellow Diffused	585	72	2.2	2.8	20	100	5	2.5	10
Orange Diffused	635	72	2.0	2.8	20	100	5	3.5	10
Red Diffused	655	54	1.7	2.0	20	100	5	0.9	10
Red Transparent		32						2.0	
Red Diffused	697	54	2.1	2.8	20	100	5	1.1	10
Red Diffused	635	54	2.0	2.8	20	100	5	2.5	10
Red Transparent		32						4.0	
Green Diffused	565	54	2.2	2.8	20	100	5	3.0	10
Green Transparent		32						3.5	
Yellow Diffused	585	54	2.2	2.8	20	100	5	3.0	10
Yellow Transparent		32						3.5	
Orange Diffused	635	54	2.0	2.8	20	100	5	2.5	10
Orange Transparent		32						4.0	
Red Diffused	655	40	1.7	2.0	20	100	5	0.7	10
Red Transparent		20						4.0	
Water Clear		20						4.0	
Red Diffused	697	40	2.1	2.8	20	100	5	2.0	10
Red Diffused	635	40	2.0	2.8	20	100	5	5.0	10
Red Transparent		20						10.0	
Green Diffused	565	40	2.2	2.8	20	100	5	6.0	10
Green Transparent		20						13.0	
Yellow Diffused	585	40	2.2	2.8	20	100	5	5.0	10
Yellow Transparent		20						13.0	
Orange Diffused	635	40	2.0	2.8	20	100	5	5.0	10
Orange Transparent		20						10.0	
Water Clear		20						13.0	
Red Diffused	655	60	1.7	2.0	20	100	5	0.8	10
Red Transparent		45						4.0	
Red Diffused	697	60	2.1	2.8	20	100	5	2.0	10
Red Diffused	635	60	2.0	2.8	20	100	5	5.0	10
Red Transparent		45						10.0	
Green Diffused	565	60	2.2	2.8	20	100	5	7.0	10
Green Transparent		45						13.0	
Yellow Diffused	585	60	2.2	2.8	20	100	5	5.0	10
Yellow Diffused		45						13.0	
Orange Diffused	635	60	2.0	2.8	20	100	5	7.0	10
Orange Transparent		45						10.0	

LED Lamps

Package	Drawing Outline (Actual Size)	Size mm (inch)	Package Dimensions	Part Number
T-1¾ Standard 1" Lead, High Performance 5 ϕ		5.0 (0.197)	6 See Page 21	LTL-4203 LTL-4204 LTL-4208 LTL-4213 LTL-4214 LTL-4223 LTL-4224 LTL-4233 LTL-4234 LTL-4253 LTL-4254 LTL-4293 LTL-4294
T-1¾ Standard 1" Lead, High Performance Wide Viewing Angle 5 ϕ		5.0 (0.197)	7 See Page 21	LTL-5103 LTL-5113 LTL-5123 LTL-5133 LTL-5153 LTL-5193
Medium Profile 4.6 ϕ		4.6 (0.185)	8 See Page 21	LTL-10203 LTL-10213 LTL-10223 LTL-10233 LTL-10253 LTL-10224 LTL-10234 LTL-10254
Medium Profile 4.6 ϕ		4.7 (0.185)	9 See Page 21	LTL-10203W LTL 10223W LTL-10233W LTL-10253W LTL-10293W
Snap-in Indicators with LTL-10200W Lamp Series		5.0 (0.189)	10 See Page 21	LTL-603-1 LTL-633-1 LTL-653-1

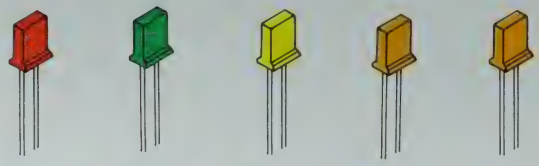
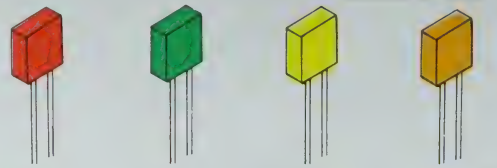
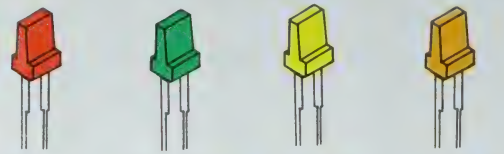
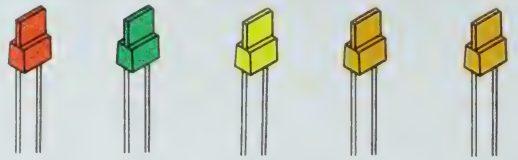
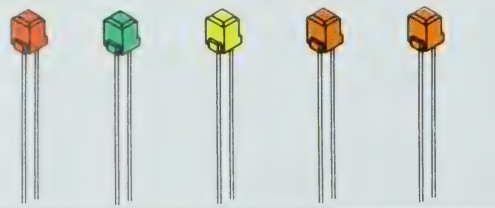
Lens Color	Peak Emisson Wavelength (nm)	Typical Viewing Angle (deg.)	Electrical and Optical Characteristics (T_A=25°C)						
			V_F (V)			I_R (μA)		Luminous Intensity (mcd)	
			Typ	Max	I_F (mA)	Max	V_R (V)	Typ	I_F (mA)
Red Diffused	655	36	1.7	2.0	20	100	5	1.1	10
Red Transparent		16						5.5	
Water Clear		16						5.5	
Red Diffused	697	36	2.1	2.8	20	100	5	3.0	10
Red Transparent		16						11.0	
Red Diffused	635	36	2.0	2.8	20	100	5	8.0	10
Red Transparent		16						40.0	
Green Diffused	565	36	2.2	2.8	20	100	5	10.0	10
Green Transparent		16						45.0	
Yellow Diffused	585	36	2.2	2.8	20	100	5	8.0	10
Yellow Transparent		16						33.0	
Orange Diffused	635	36	2.0	2.8	20	100	5	10.0	10
Orange Transparent		16						40.0	
Red Diffused	655	65	1.7	2.0	20	100	5	1.0	10
Red Diffused	697	65	2.1	2.8	20	100	5	1.4	10
Red Diffused	635	65	2.0	2.8	20	100	5	5.0	10
Green Diffused	565	65	2.2	2.8	20	100	5	8.0	10
Yellow Diffused	585	65	2.2	2.8	20	100	5	7.0	10
Orange Diffused	635	65	2.0	2.8	20	100	5	8.0	10
Red Diffused	655	60	1.7	2.0	20	100	5	0.7	10
Red Diffused	697	60	2.1	2.8	20	100	5	1.5	10
Red Diffused	635	60	2.0	2.8	20	100	5	6.0	10
Green Diffused	565	60	2.2	2.8	20	100	5	6.0	10
Yellow Diffused	585	60	2.2	2.8	20	100	5	3.5	10
Red Transparent	635	34	2.0	2.8	20	100	5	17.0	10
Green Transparent	565	34	2.2	2.8	20	1100	5	19.0	10
Yellow Transparent	585	34	2.2	2.8	20	100	5	19.0	10
Red Diffused	655	60	1.7	2.0	20	100	5	0.7	10
Red Diffused	635	60	2.0	2.8	20	100	5	6.0	10
Green Diffused	565	60	2.2	2.8	20	100	5	6.0	10
Yellow Diffused	585	60	2.2	2.8	20	100	5	3.5	10
Orange Diffused	635	60	2.0	2.8	20	100	5	6.0	10
Red Diffused	655	60	1.7	2.0	20	100	5	0.7	10
Green Diffused	565	60	2.2	2.8	20	100	5	6.0	10
Yellow Diffused	585	60	2.2	2.8	20	100	5	3.5	10

LED Lamps

Package	Drawing Outline (Actual Size)	Size mm (inch)	Package Dimensions	Part Number
Logic-status Indicators Holder With LTL-10200W Lamp Series		4 ..8 (0.189)	17 See Page 22	LTL-503-11 LTL-533-11 LTL-553-11
		4.8 (0.189)	18 See Page 23	LTL-503-14 LTL-533-14 LTL-553-14
T-1 3/4 Dual Color Indicator		5.0 (0.197)	19 See Page 23	LTL-52RG
T-1 3/4 Low Profile 5 ϕ		5.0 (0.197)	20 See Page 23	LTL-5203 LTL-5223 LTL-5224 LTL-5233 LTL-5234 LTL-5253
Panel Dot Indicators		2.0 (0.079)	21 See Page 23	LTL-1204A LTL-1214A LTL-1224A LTL-1234A LTL-1254A LTL-1274A LTL-1294A
Cylindrical 3 ϕ		3.0 (0.118)	22 See Page 23	LTL-2201A LTL-2211A LTL-2221A LTL-2231A LTL-2251A LTL-2271A LTL-2291A
Cylindrical 5 ϕ		5.0 (0.197)	23 See Page 23	LTL-2203A LTL-2213A LTL-2223A LTL-2233A LTL-2253A LTL-2293A

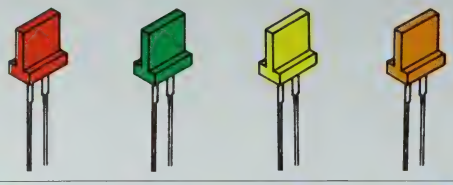
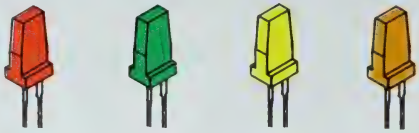
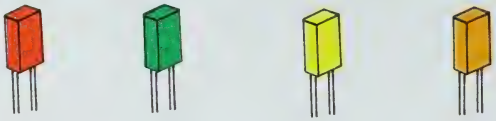
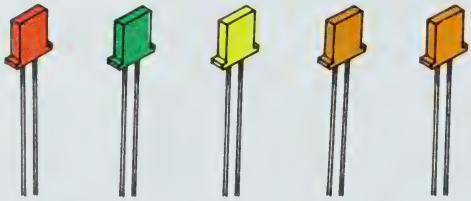
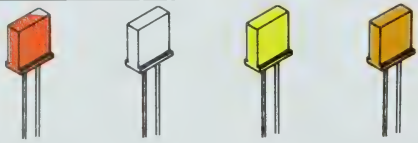
Lens Color	Peak Emission Wavelength (nm)	Typical Viewing Angle (deg.)	Electrical and Optical Characteristics (T_A=25°C)						
			V_F (V)			I_R (μA)		Luminous Intensity (mcd)	
			Typ	Max	I_F (mA)	Max	V_R (V)	Typ	I_F (mA)
Red Diffused	655	60	1.7	2.0	20	100	5	0.7	10
Green Diffused	565	60	2.2	2.8	20	100	5	6.0	10
Yellow Diffused	585	60	2.2	2.8	20	100	5	3.5	10
Red Diffused	655	60	1.7	2.0	20	100	5	0.7	10
Green Diffused	565	60	2.2	2.8	20	100	5	6.0	10
Yellow Diffused	585	60	2.2	2.8	20	100	5	3.5	10
White Diffused	697	54	2.1	2.8	20	100	5	1.1	10
	565	54	2.2	2.8	20	100	5	2.5	10
Red Diffused	655	64	1.7	2.0	20	100	5	0.5	10
Red Diffused	635	64	2.0	2.8	20	100	5	4.0	10
Red Transparent		44						8.0	
Green Diffused	565	64	2.2	2.8	20	100	5	4.0	10
Green Transparent		44						14.0	
Yellow Diffused	585	64	2.2	2.8	20	100	5	4.0	10
Red Diffused	655	120	1.7	2.0	20	100	5	0.1	10
Red Diffused	697	120	2.1	2.8	20	100	5	0.6	10
Red Diffused	635	120	2.0	2.8	20	100	5	1.3	10
Green Diffused	565	120	2.2	2.8	20	100	5	1.3	10
Yellow Diffused	585	120	2.2	2.8	20	100	5	1.0	10
Amber Diffused	600	120	2.2	2.8	20	100	5	0.8	10
Orange Diffused	635	120	2.0	2.8	20	100	5	1.4	10
Red Diffused	655	180	1.7	2.0	20	100	5	0.2	10
Red Diffused	697	180	2.1	2.8	20	100	5	0.4	10
Red Diffused	635	180	2.0	2.8	20	100	5	1.2	10
Green Diffused	565	180	2.2	2.8	20	100	5	1.4	10
Yellow Diffused	585	180	2.2	2.8	20	100	5	1.1	10
Amber Diffused	600	180	2.2	2.8	20	100	5	1.0	10
Orange Diffused	635	180	2.0	2.8	20	100	5	1.2	10
Red Diffused	655	200	1.7	2.0	20	100	5	0.25	10
Red Diffused	697	200	2.1	2.8	20	100	5	0.3	10
Red Diffused	635	200	2.0	2.8	20	100	5	0.7	10
Green Diffused	635	200	2.2	2.8	20	100	5	0.8	10
Yellow Diffused	565	200	2.2	2.8	20	100	5	1.2	10
Orange Diffused	585	200	2.0	2.8	20	100	5	0.9	10

LED Lamps

Package	Drawing Outline (Actual Size)	Size mm (inch)	Package Dimensions	Part Number
Rectangular Bars		2.0×5.0 (0.079 ×0.197)	24 See Page 24	LTL-3201A LTL-3211A LTL-3221A LTL-3231A LTL-3251A LTL-3271A LTL-3291A
		2.5×7.1 (0.098 ×0.28)	25 See Page 24	LTL-3213A LTL-3223A LTL-3233A LTL-3253A LTL-3293A
		2.0×5.5 (0.079 ×0.22)	26 See Page 24	LTL-3215S LTL-3225S LTL-3235S LTL-3255S LTL-3295S
		1.0×5.1 (0.039 ×0.2)	27 See Page 24	LTL-3217A LTL-3237A LTL-3257A LTL-3277A LTL-3297A
Rounded Rectangular		2.4×4.9 (0.094 ×0.193)	28 See Page 24	LTL-6203LN LTL-6213LN LTL-6223LN LTL-6233LN LTL-6253LN LTL-6293LN
Arrowhead Pointers		4.5×3.0 (0.177 ×0.118)	29 See Page 24	LTL-8212A LTL-8222A LTL-8232A LTL-8252A LTL-8292A
Square		3.0×3.0 (0.118 ×0.118)	30 See Page 25	LTL-9212A LTL-9222A LTL-9232A LTL-9252A LTL-9272A LTL-9292A

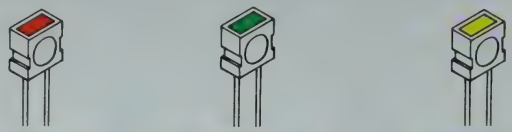
Lens Color	Peak Emission Wavelength (nm)	Typical Viewing Angle (deg.)	Electrical and Optical Characteristics (T_A = 25°C)						
			V_F (V)			I_R (μA)		Luminous Intensity (mcd)	
			Typ	Max	I_F (mA)	Max	V_R (V)	Typ	I_F (mA)
Red Diffused	655	124	1.7	2.0	20	100	5	0.2	10
Red Diffused	697	124	2.1	2.8	20	100	5	0.5	10
Red Diffused	635	124	2.0	2.8	20	100	5	1.5	10
Green Diffused	565	124	2.2	2.8	20	100	5	1.5	10
Yellow Diffused	585	124	2.2	2.8	20	100	5	1.5	10
Amber Diffused	600	124	2.2	2.8	20	100	5	1.2	10
Orange Diffused	635	124	2.0	2.8	20	100	5	1.5	10
Red Diffused	697	130	2.1	2.8	20	100	5	0.5	10
Red Diffused	635	130	2.0	2.8	20	100	5	1.5	10
Green Diffused	565	130	2.2	2.8	20	100	5	1.6	10
Yellow Diffused	585	130	2.2	2.8	20	100	5	1.5	10
Orange Diffused	635	130	2.0	2.8	20	100	5	1.3	10
Red Diffused	697	150	2.1	2.8	20	100	5	0.4	10
Red Diffused	635	150	2.0	2.8	20	100	5	1.0	10
Green Diffused	565	150	2.2	2.8	20	100	5	1.0	10
Yellow Diffused	585	150	2.2	2.8	20	100	5	0.8	10
Orange Diffused	635	150	2.0	2.8	20	100	5	0.8	10
Red Diffused	697	120	2.1	2.8	20	100	5	0.6	10
Green Diffused	565	120	2.2	2.8	20	100	5	1.5	10
Yellow Diffused	585	120	2.2	2.8	20	100	5	1.5	10
Amber Diffused	600	120	2.2	2.8	20	100	5	1.5	10
Orange Diffused	635	120	2.0	2.8	20	100	5	1.5	10
Red Diffused	655	70	1.7	2.0	20	100	5	0.2	10
Red Diffused	697	70	2.1	2.8	20	100	5	1.5	10
Red Diffused	635	70	2.0	2.8	20	100	5	3.0	10
Green Diffused	565	70	2.2	2.8	20	100	5	7.0	10
Yellow Diffused	585	70	2.2	2.8	20	100	5	5.0	10
Orange Diffused	635	70	2.0	2.8	20	100	5	3.0	10
Red Diffused	697	100	2.1	2.8	20	100	5	0.6	10
Red Diffused	635	100	2.0	2.8	20	100	5	1.3	10
Green Diffused	565	100	2.2	2.8	20	100	5	1.5	10
Yellow Diffused	585	100	2.2	2.8	20	100	5	1.5	10
Orange Diffused	635	100	2.0	2.8	20	100	5	1.8	10
Red Diffused	697	100	2.1	2.8	20	100	5	0.7	10
Red Diffused	635	100	2.0	2.8	20	100	5	1.5	10
Green Diffused	565	100	2.2	2.8	20	100	5	1.8	10
Yellow Diffused	585	100	2.2	2.8	20	100	5	1.4	10
Amber Diffused	600	100	2.2	2.8	20	100	5	1.3	10
Orange Diffused	635	100	2.0	2.8	20	100	5	1.5	10

LED Lamps

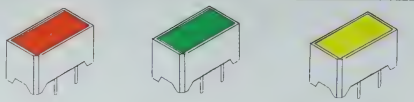
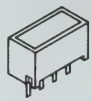
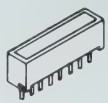
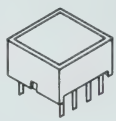
Package	Drawing Outline (Actual Size)	Size mm (inch)	Package Dimensions	Part Number
Square		5.0×5.0 (0.197 ×0.197)	31 See Page 25	LTL-9213A LTL-9223A LTL-9233A LTL-9253A LTL-9273A LTL-9293A
Rectangular Bars		1.5×7.0 (0.059 ×0.276)	32 See Page 25	LTL-13215A LTL-13225A LTL-13235A LTL-13255A LTL-13295A
		1.4×3.8 (0.055 ×0.15)	33 See Page 25	LTL-13218A LTL-13238A LTL-13258A LTL-13278A
		2.0×4.5 (0.079 ×0.177)	34 See Page 25	LTL-13219B LTL-13239B LTL-13259B LTL-13279B
		2.4×5.0 (0.094 ×0.197)	35 See Page 25	LTL-23201AL LTL-23211AL LTL-23221AL LTL-23231AL LTL-23251AL LTL-23291AL
		2.0×5.0 (0.079 ×0.197)	36 See Page 26	LTL-23203A LTL-23213A LTL-23223A LTL-23233A LTL-23253A LTL-23273A LTL-23293A
		2.0×6.0 (0.079 ×0.236)	37 See Page 26	LTL-23214A LTL-23234A LTL-23254A LTL-23274A

Lens Color	Peak Emission Wavelength (nm)	Typical Viewing Angle (deg.)	Electrical and Optical Characteristics (T_A = 25°C)						
			V_F (V)			I_R (μA)		Luminous Intensity (mcd)	
			Typ	Max	I_F (mA)	Max	V_R (V)	Typ	I_F (mA)
Red Diffused	697	150	2.1	2.8	20	100	5	0.6	10
Red Diffused	635	150	2.0	2.8	20	100	5	1.6	10
Green Diffused	565	150	2.2	2.8	20	100	5	1.8	10
Yellow Diffused	585	150	2.2	2.8	20	100	5	1.7	10
Amber Diffused	600	150	2.2	2.8	20	100	5	1.4	10
Orange Diffused	635	150	2.0	2.8	20	100	5	1.6	10
Red Diffused	697	150	2.1	2.8	20	100	5	0.4	10
Red Diffused	635	150	2.0	2.8	20	100	5	0.9	10
Green Diffused	565	150	2.2	2.8	20	100	5	1.0	10
Yellow Diffused	585	150	2.2	2.8	20	100	5	1.0	10
Orange Diffused	635	150	2.0	2.8	20	100	5	0.9	10
Red Diffused	697	180	2.1	2.8	20	100	5	0.3	10
Green Diffused	565	180	2.2	2.8	20	100	5	1.1	10
Yellow Diffused	585	180	2.2	2.8	20	100	5	0.8	10
Amber Diffused	600	180	2.2	2.8	20	100	5	0.8	10
Red Diffused	697	170	2.1	2.8	20	100	5	0.3	10
Green Diffused	565	170	2.2	2.8	20	100	5	0.7	10
Yellow Diffused	585	170	2.2	2.8	20	100	5	0.6	10
Amber Diffused	600	170	2.2	2.8	20	100	5	0.6	10
Red Diffused	655	130	1.7	2.0	20	100	5	0.18	10
Red Diffused	697	130	2.1	2.8	20	100	5	0.35	10
Red Diffused	635	130	2.0	2.8	20	100	5	1.3	10
Green Diffused	565	130	2.2	2.8	20	100	5	1.5	10
Yellow Diffused	585	130	2.2	2.8	20	100	5	1.3	10
Orange Diffused	635	130	2.0	2.8	20	100	5	1.3	10
Red Diffused	655	140	1.7	2.0	20	100	5	0.2	10
Red Diffused	697	140	2.1	2.0	20	100	5	0.5	10
Red Diffused	635	140	2.0	2.8	20	100	5	1.5	10
Green Diffused	565	140	2.2	2.8	20	100	5	1.5	10
Yellow Diffused	585	140	2.2	2.8	20	100	5	1.5	10
Amber Diffused	600	140	2.2	2.8	20	100	5	1.2	10
Orange Diffused	635	140	2.0	2.8	20	100	5	1.5	10
Red Diffused	697	125	2.1	2.8	20	100	5	0.5	10
Green Diffused	565	125	2.2	2.8	20	100	5	0.7	10
Yellow Diffused	585	125	2.2	2.8	20	100	5	1.5	10
Amber Diffused	600	125	2.2	2.8	20	100	5	1.4	10

LED Lamps/Light Bars/Surface Mount LEDS

Package	Drawing Outline (Actual Size)	Size mm (inch)	Package Dimensions	Part Number
Rectangular Bars		5.6×3.2 (0.22 ×0.126)	38 See Page 26	LTL-33221AA LTL-33231AA LTL-33251AA
Big Lamp Type		20 (.800)	39 See Page 26	LTJ-811HR LTJ-811G LTJ-811Y

Light Bars

Light Bar Type		12.7×6.35	40 See Page 26	LTL-57173HR LTL-54173G LTL-53173Y
Light Bar Type		8.89×3.81	41 See Page 26	LTL-2300HR LTL-2500G LTL-2400Y
Light Bar Type		19.05×3.81	42 See Page 27	LTL-2350HR LTL-2550G LTL-2450Y
Light Bar Type		8.89×8.89	43 See Page 27	LTL-2655HR LTL-2855G LTL-2755Y

Surface Mount Assembly LED Lamp

Package	Drawing Outline	Size mm (inch)	Package Diminsions	Part Number
Sot-23 Surface Mounted LED Lamp	 (Scale 6/1)	1.5×3.0	44 See Page 27	LTL-907PK LTL-907LK LTL-907EK LTL-907HK LTL-907NK LTL-907JK

Lens Color	Peak Emission Wavelength (nm)	Typical Viewing Angle (deg.)	Electrical and Optical Characteristics (T_A=25°C)						
			V_F (V)			I_R (μA)		Luminous Intensity (mcd)	
			Typ	Max	I_F (mA)	Max	V_R (V)	Typ	I_F (mA)
Red Diffused	635	100	2.0	2.8	20	100	5	4.0	20
Green Diffused	565	100	2.2	2.8	20	100	5	4.0	20
Yellow Diffused	585	100	2.2	2.8	20	100	5	4.0	20
Red Diffused	635	100	2.1	2.8	20	100	5	25	10
Green Diffused	565	180	2.1	2.8	20	100	5	25	10
Yellow Diffused	585	180	2.1	2.8	20	100	5	22	10

Red Diffused	635	100	2.1	2.8	20	100	5	9.8	10
Green Diffused	565	100	2.1	2.8	20	100	5	9.8	10
Yellow Diffused	585	100	2.1	2.8	20	100	5	9.0	10
White Diffused	630	100	2.1	2.8	20	100	5	9.0	10
White Diffused	565	100	2.1	2.8	20	100	5	9.0	10
White Diffused	585	100	2.1	2.8	20	100	5	9.2	10
White Diffused	630	100	2.1	2.8	20	100	5	17	10
White Diffused	565	100	2.1	2.8	20	100	5	17	10
White Diffused	585	100	2.1	2.8	20	100	5	15	10
White Diffused	630	100	2.1	2.8	20	100	5	17	10
White Diffused	565	100	2.1	2.8	20	100	5	17	10
White Diffused	585	100	2.1	2.8	20	100	5	15	10

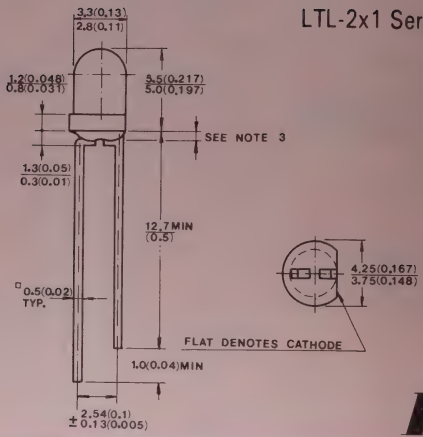
Lens Color	Peak Emission Wavelength (nm)	Typical Viewing Angle (deg.)	Electrical and Optical Characteristic (T_A=25°C)						
			V_F (V)			I_R (μA)		Luminous Intensity (mcd)	
			Typ	Max	I_F (mA)	Max	V_R (V)	Typ	I_F (mA)
Clear	699	140	2.1	2.8	20	100	5	1.7	20
Clear	565	140	2.2	2.8	20	100	5	2	20
Clear	635	140	2.0	2.8	20	100	5	2	20
Clear	565	140	2.2	2.8	20	100	5	2	20
	635		2.0	2.8					
Clear	660	140	1.8	2.4	20	100	4	3.5	20
Clear	635	140	2.0	2.8	20	100	5	2	20

Package Dimensions

Note:

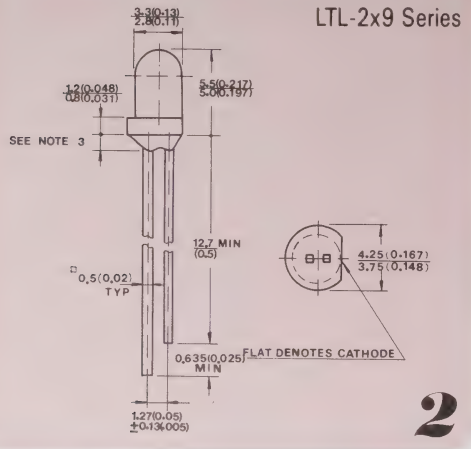
1. All dimensions are in millimeters (inches).
2. Lead spacing is measured where the leads emerge from the package.
3. Protruded resin under flange 1.5mm (0.059") MAX.
4. Specifications Subject To Change Without Notice.

LTL-2x1 Series



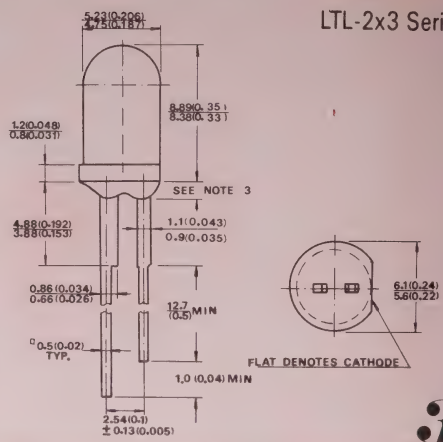
1

LTL-2x9 Series



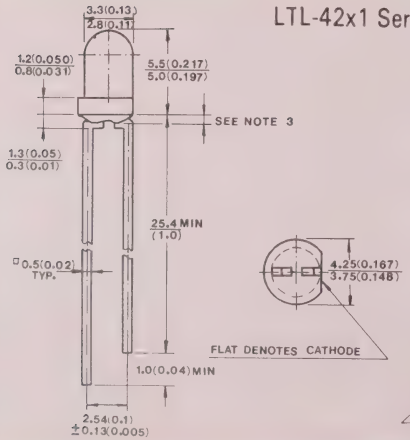
2

LTL-2x3 Series



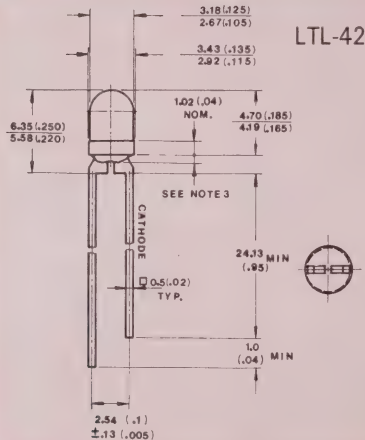
3

LTL-42x1 Series



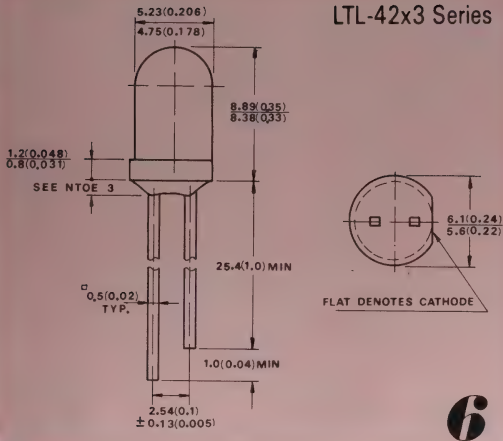
4

LTL-42 × 1N Series



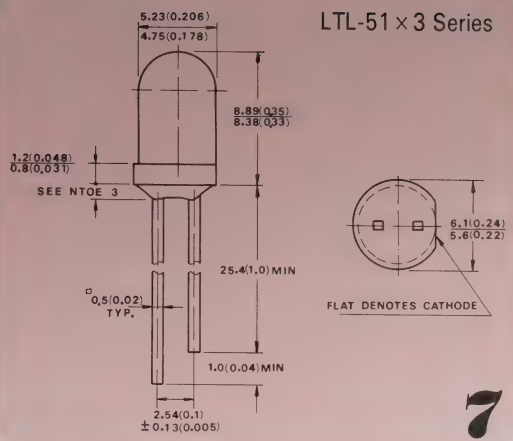
5

LTL-42x3 Series



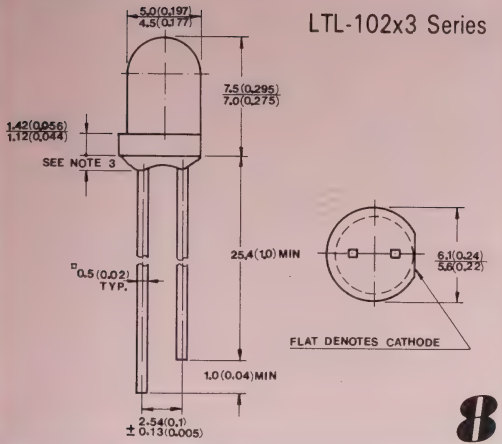
6

LTL-51×3 Series



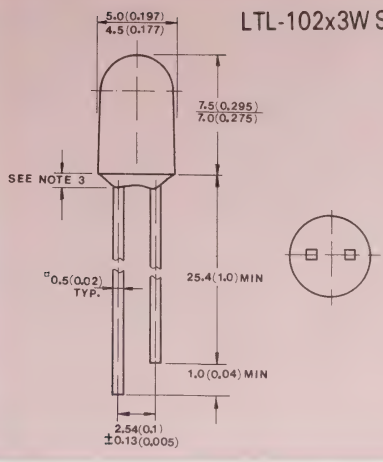
7

LTL-102x3 Series



8

LTL-102x3W Series



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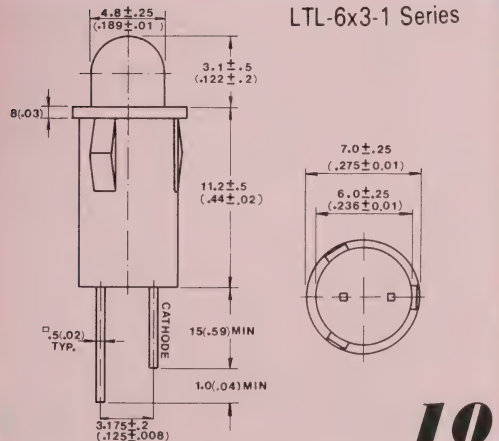
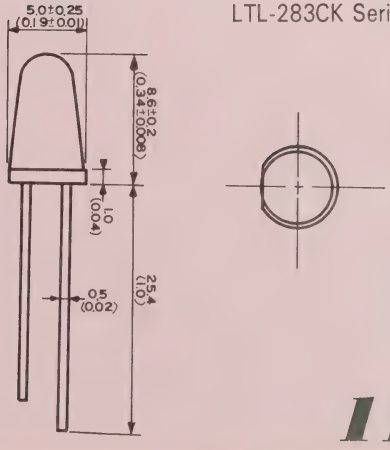
LTL-6x3-1 Series



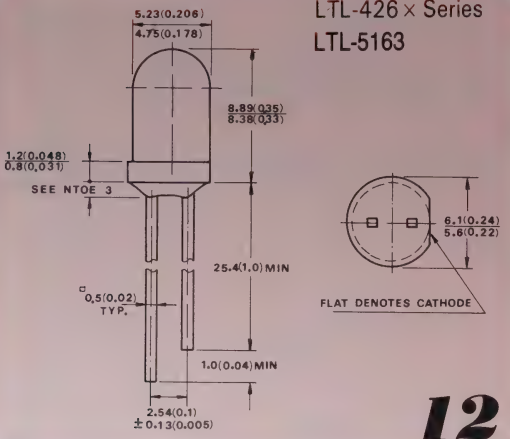
10

LTL-283CK Series



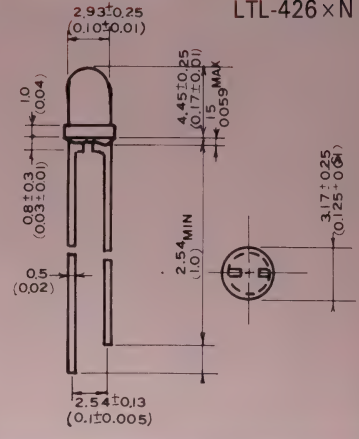
11

LTL-426 × Series
LTL-5163



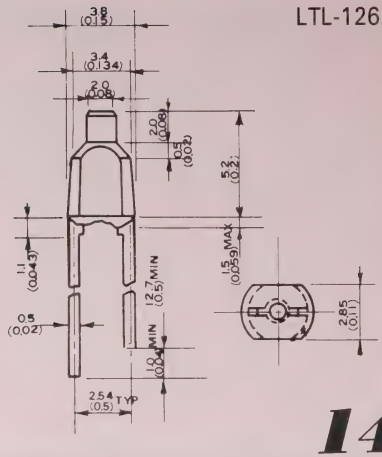
12

LTL-426 × N Series



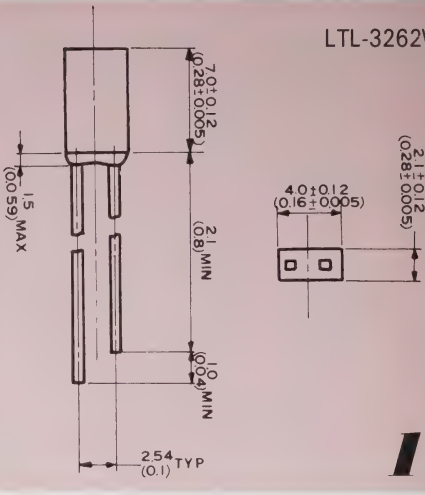
13

LTL-1262



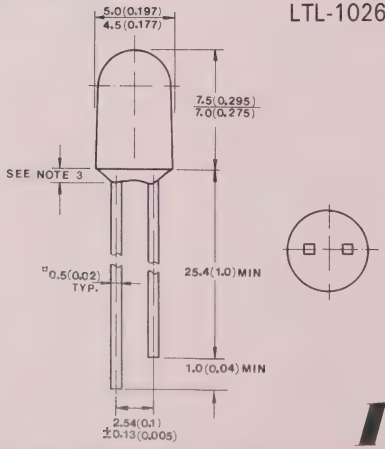
14

LTL-3262WC



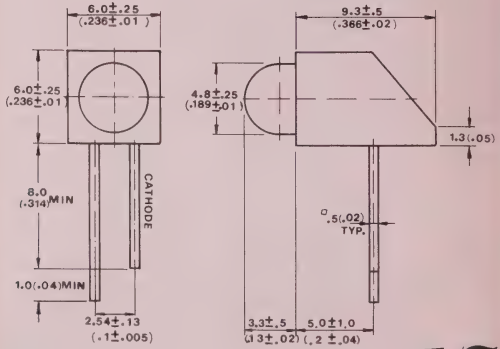
15

LTL-10263W



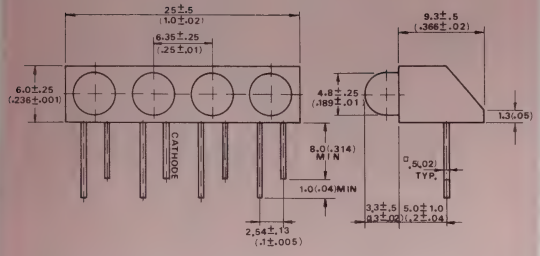
16

LTL-5x3-11 Series



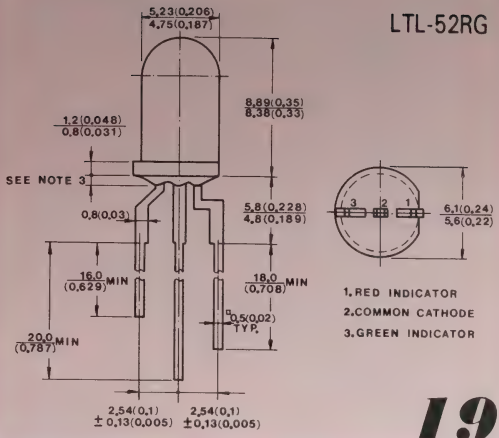
17

LTL-5x3-14 Series



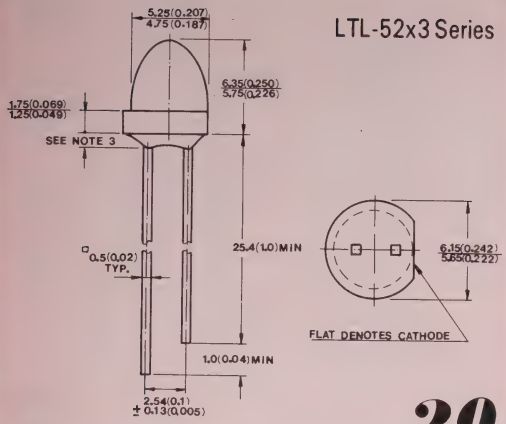
18

LTL-52RG



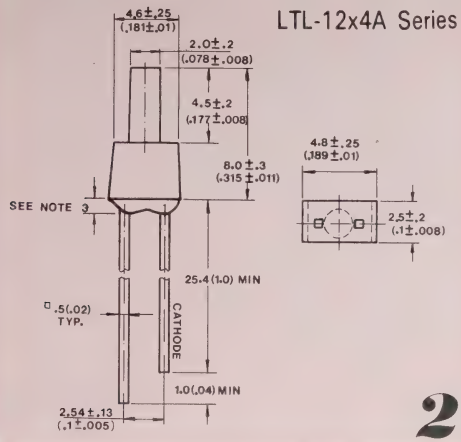
19

LTL-52x3 Series



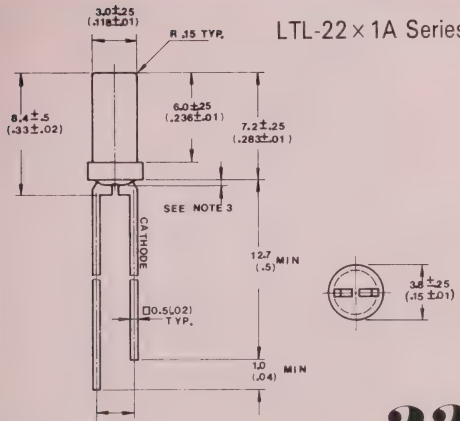
20

LTL-12x4A Series



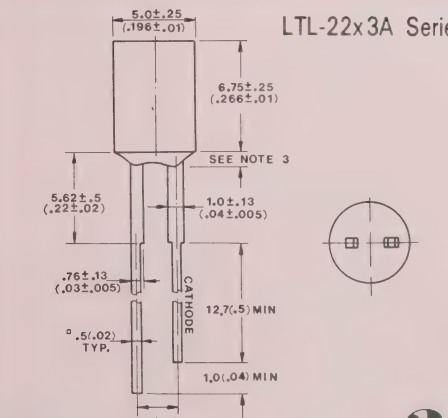
21

LTL-22x1A Series



22

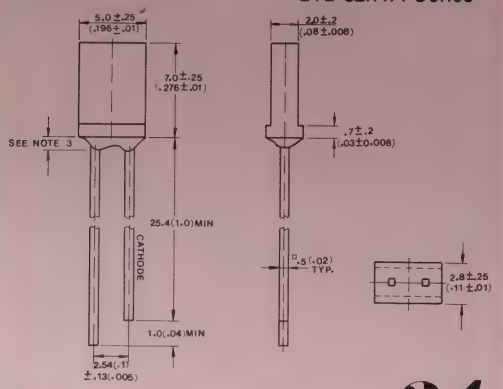
LTL-22x3A Series



23

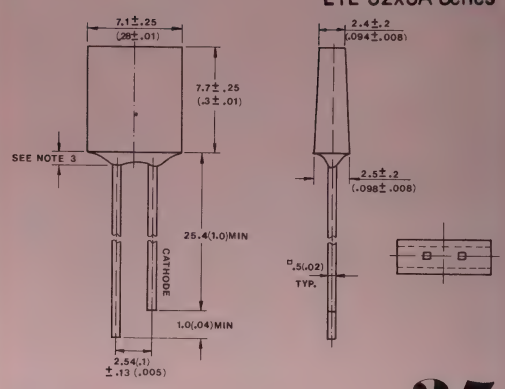
LED Lamps

LTL-32x1A Series



24

LTL-32x3A Series



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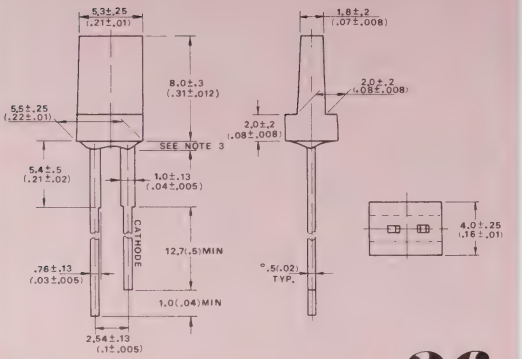
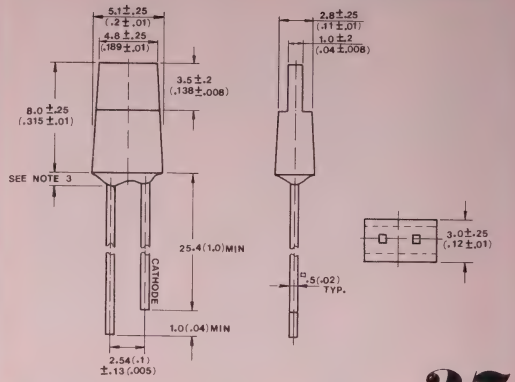
LTL-32x5S Series



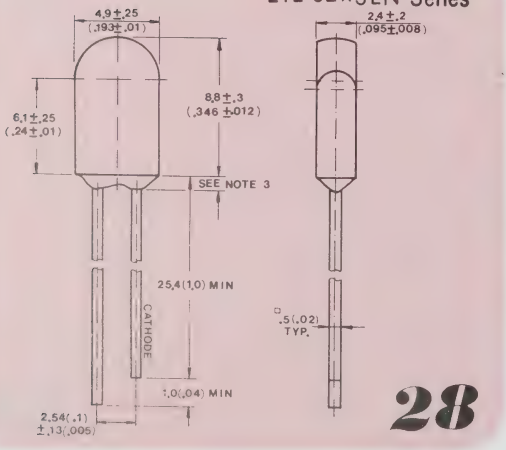
26

LTL-32x7A Series



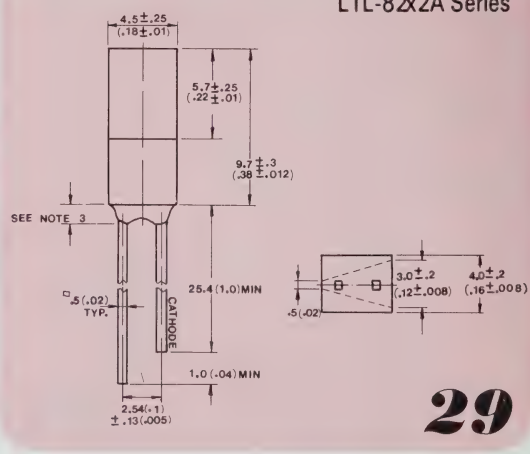
27

LTL-62x3LN Series



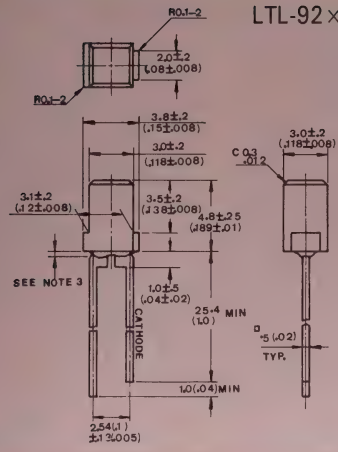
28

LTL-82x2A Series



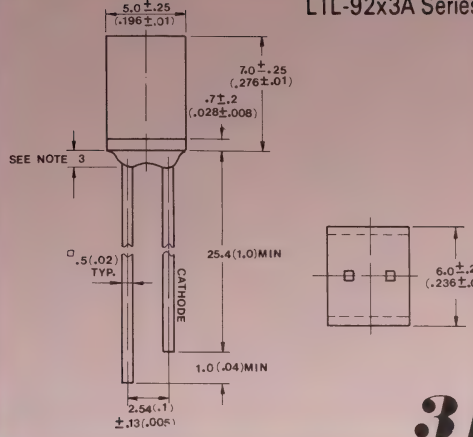
29

LTL-92 x 2A Series



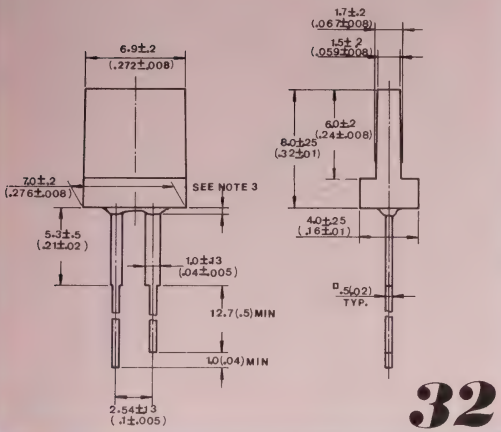
30

LTL-92x3A Series



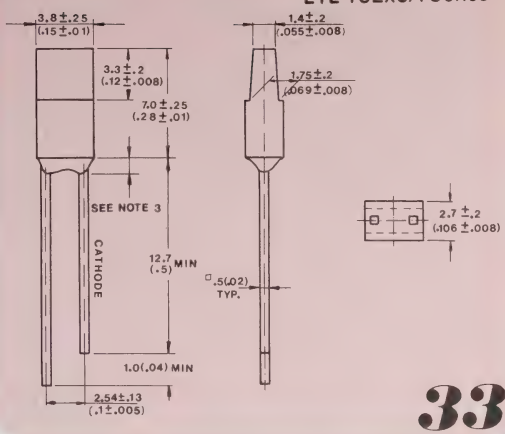
31

LTL-132 x 5A Series



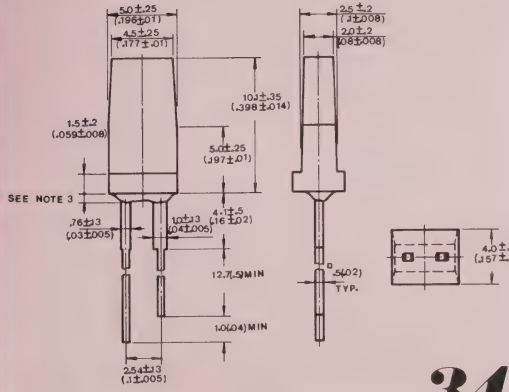
32

LTL-132x8A Series



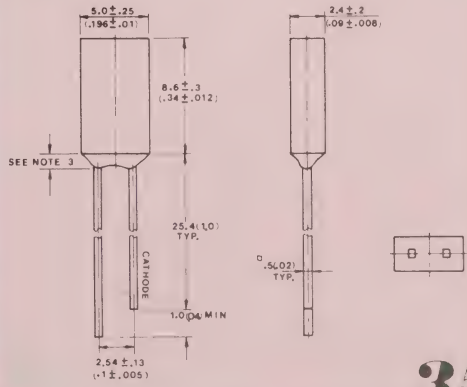
33

LTL-132 x 9B Series



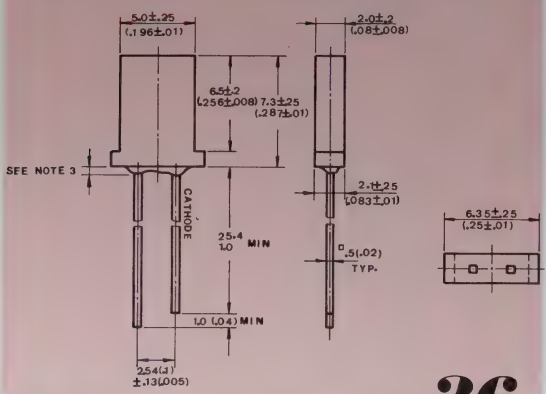
34

LTL-232x1AL Series



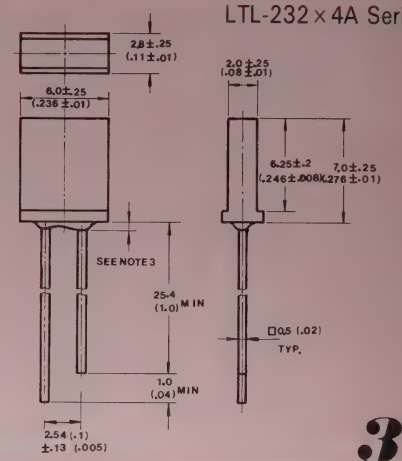
35

LTL-232 x 3A Series



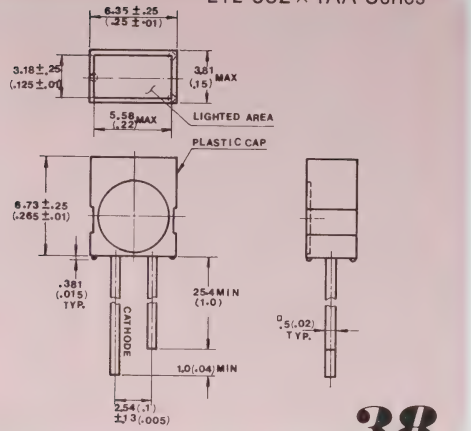
36

LTL-232 x 4A Series



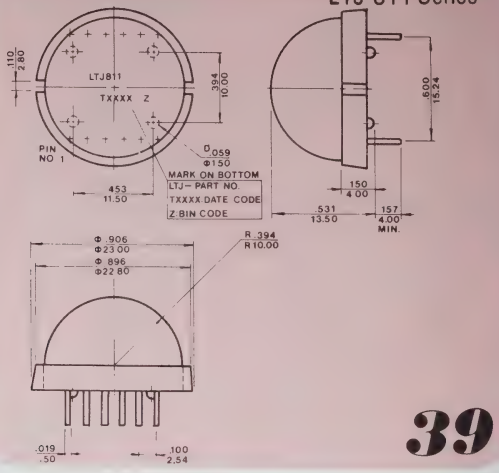
37

LTL-332 x 1AA Series



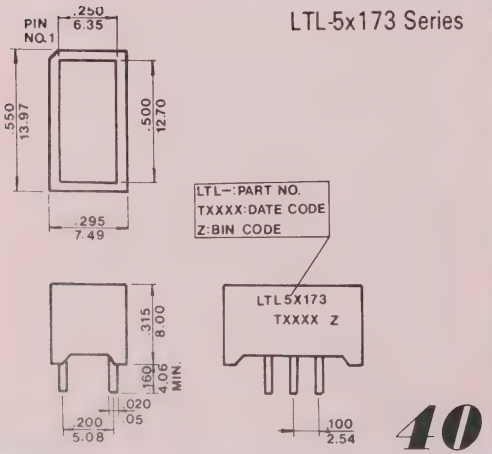
38

LTJ-811 Series



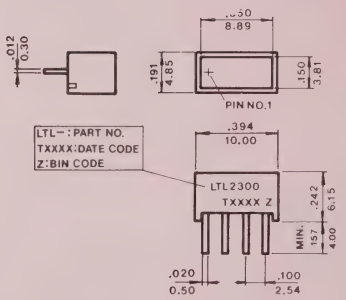
39

LTL-5x173 Series



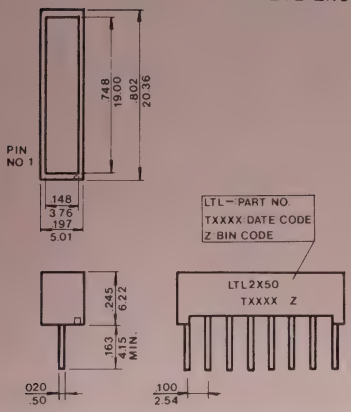
40

LTL-2 x 00 Series



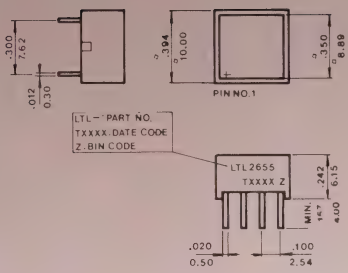
41

LTL-2x50 Series



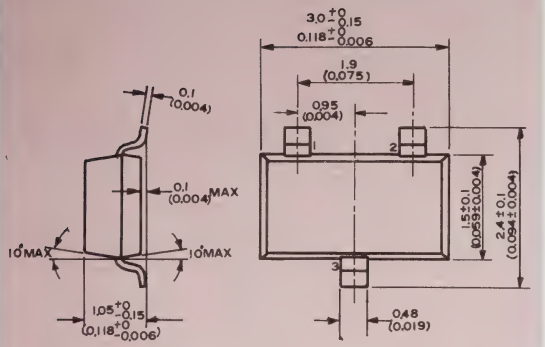
42

LTL-2x55 Series



43

LTL-907 Series



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LED Numberic Displays & Dot Matrix Displays

Actual Digit Size	Red		Bright Red		Green		Yellow		Orange		High Eff. Red	
	Part Number	Avg. Iv. Typ.	Part Number	Avg. Iv. Typ.	Part Number	Avg. Iv. Typ.	Part Number	Avg. Iv. Typ.	Part Number	Avg. Iv. Typ.	Part Number	Avg. Iv. Typ.
0.3" 	LTS311AR LTS312AR LTS313AR LTS315AR LTS316AR	450µcd @ 10mA	LTS311AP LTS312AP LTS313AP LTS315AP LTS316AP	600µcd @ 10mA	LTS311AG LTS312AG LTS313AG LTS315AG LTS316AG	1800µcd @ 10mA	LTS311AY LTS312AY LTS313AY LTS315AY LTS316AY	1300µcd @ 10mA	LTS311AE LTS312AE LTS313AE LTS315AE LTS316AE	1800µcd @ 10mA	LTS311AHR LTS312AHR LTS313AHR LTS315AHR LTS316AHR	1800µcd @ 10mA
0.36" 	LTS360R LTS367R LTS368R	450µcd @ 10mA	LTS360P LTS367P LTS368P	600µcd @ 10mA	LTS360G LTS367G LTS368G	1800µcd @ 10mA	– – –	–	LTS360E LTS367E LTS368E	1800µcd @ 10mA	LTS360HR LTS367HR LTS368HR	1800µcd @ 10mA
0.4" 	LTS4705AR LTS4710AR LTS4740AR LTS4780AR LTS4730AR	480µcd @ 10mA	LTS4705AP LTS4710AP LTS4740AP LTS4780AP LTS4730AP	650µcd @ 10mA	LTS4505AG LTS4510AG LTS4540AG LTS4580AG LTS4530AG	2000µcd @ 10mA	LTS4805AY LTS4810AY LTS4840AY LTS4880AY LTS4830AY	1500µcd @ 10mA	LTS4605AE LTS4610AE LTS4640AE LTS4680AE LTS4630AE	2000µcd @ 10mA	LTS4905AHR LTS4910AHR LTS4940AHR LTS4980AHR LTS4930AHR	2000µcd @ 10mA
0.43" 	LTS7751R LTS7760R LTS7756R	480µcd @ 10mA	LTS7751P LTS7760P LTS7756P	650µcd @ 10mA	LTS7671GN LTS7673GN LTS7676GN	2000µcd @ 10mA	LTS7661YN LTS7663YN LTS7666YN	1700µcd @ 10mA	LTS3731E LTS3733E LTS3736E	2000µcd @ 10mA	LTS7651HR LTS7653HR LTS7656HR	2000µcd @ 10mA
0.52 	LTS546AR LTS547AR LTS548AR LTS549AR LTS5311R LTS5811R	500µcd @ 10mA	LTS546AP LTS547AP LTS548AP LTS549AP LTS5311P LTS5811P	700µcd @ 10mA	LTS546AG LTS547AG LTS548AG LTS549AG LTS5311G LTS5811G	2000µcd @ 10mA	LTS546AY LTS547AY LTS548AY LTS549AY LTS5311Y LTS5811Y	1600µcd @ 10mA	LTS546AE LTS547AE LTS548AE LTS549AE LTS5311E LTS5811E	2000µcd @ 10mA	LTS546AHR LTS547AHR LTS548AHR LTS549AHR LTS5311HR LTS5811HR	2000µcd @ 10mA
0.56" 	LTS5301R LTS5303R LTS5307R LTS5308R	500µcd @ 10mA	LTS5301P LTS5303P LTS5307P LTS5308P	800µcd @ 10mA	LTS5801G LTS5803G LTS5807G LTS5808G	2200µcd @ 10mA	LTS5701Y LTS5703Y LTS5707Y LTS5708Y	1800µcd @ 10mA	LTS5501E LTS5503E LTS5507E LTS5508E	2200µcd @ 10mA	– – – –	–
0.56" 	LTS6760R LTS6780R	500µcd @ 10mA	LTS6760P LTS6780P	700µcd @ 10mA	LTS6460G LTS6480G	2000µcd @ 10mA	LTS6860Y LTS6880Y	1700µcd @ 10mA	LTS6660E LTS6680E	2000µcd @ 10mA	LTS6960HR LTS6980HR	2000µcd @ 10mA
0.6" 	– – – –	–	LTS306P LTS307P LTS308P LTS309P	700µcd @ 10mA	LTS306G LTS307G LTS308G LTS309G	1800µcd @ 10mA	– – – –	–	– – – –	–	LTS306HR LTS307HR LTS308HR LTS309HR	1800µcd @ 10mA
0.8" 	LTS3401LR LTS3403LR LTS3406LR	550µcd @ 10mA	LTS3401LP LTS3403LP LTS3406LP	800µcd @ 10mA	LTS3401LG LTS3403LG LTS3406LG	2200µcd @ 10mA	LTS3401LY LTS3403LY LTS3406LY	1800µcd @ 10mA	LTS3401LE LTS3403LE LTS3406LE	2200µcd @ 10mA	– – –	–
1.02" 	LTS1720R LTS1723R LTS1740R LTS1743R	900µcd @ 10mA	LTS1720P LTS1723P LTS1740P LTS1743P	1500µcd @ 10mA	LTS1720G LTS1723G LTS1740G LTS1743G	4000µcd @ 10mA	LTS1720Y LTS1723Y LTS1740Y LTS1743Y	3200µcd @ 10mA	LTS1720E LTS1723E LTS1740E LTS1743E	4500µcd @ 10mA	– –	–

Description:

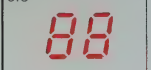
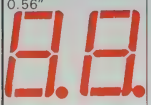
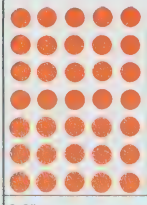
A -Universal, ± 1 Overflow Rt. Hand Decimal
B -Common Anode, Rt. and Lt. Hand Decimal
C -Common Cathode, Rt. Hand Decimal
D -Common Anode, ± 1 Overflow Rt. Hand Decimal
E -Common Anode, Rt. Hand Decimal
F -Common Cathode, ± 1 Overflow Rt. Hand Decimal
G -Common Cathode, Rt. and Lt. Hand Decimal
H -Common Cathode
I -Common Anode
J -Common Cathode, Rt. Hand Decimal ± 1.8.
K -Common Anode, Rt. Hand Decimal ± 1.8.
L -Common Cathode, Alphanumeric display
M -Common Anode, Alphanumeric display
N -5 × 7 Dot Matrix Display Column Anode
O -5 × 7 Dot Matrix Display Column Cathode

Pin Connection																		Description	Dimension Package
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
+h	NP	−h	−g	−j	+j	+g	+dp	NP	−dp	−c	−b	+b	+c					A	2
−a	−f	CA	NP	NP	−Ldp	−e	−d	−Rdp	−c	−g	NP	−b	CA					B	1
CC	+f	+g	+e	+d	CC	+dp	+c	+b	+a									C	1
+f	+g	NP	CC	NP	+e	+d	+c	+dp	NP	NP	CC	+b	+a					C	1
+ghj	NP	+ghj	NP	NP	NP	−hj	−g		−c	−b	NP	NP	+bc					D	2
CA	−f	−g	−e	−d	CA	−dp	−c	−b	−a									E	3
CC	+f	+g	+e	+d	CC	+dp	+c	+b	+a									C	3
−Pl.Mi	+Pl.	+Mi.	−Pl.Mi	NP	−bcdp	+dp	+c	+b	−bcdp									F	4
+h	NP	−h	−g	−j	+j	+g	+dp	NP	−dp	−c	−b	+b	+c					A	6
−a	−f	CA	NP	NP	NP	−e	−d	−dp	−c	−g	NP	−b	CA					E	5
+f	+	NP	CC	NP	+e	+d	+c	+dp	NP	NP	CC	+b	+a					C	5
CC	+f	+g	+e	+d	CC	+dp	+c	+b	+a									C	5
+ghj	NP	+ghj	NP	NP	NC	−hj	−g	−dp	−c	−b	NP	NP	+bcdp					D	6
−a	−f	CA	NP	NP	−Ldp	−e	−d	−Rdp	−c	−g	NP	−b	CA					B	7
+a	+f	CC	NP	NP	NC	+e	+d	+Rdp	+c	+g	NP	+b	CC					C	7
−h	+h	NP	−g	−j	+j	+g	+dp	−dp	−c	−b	NP	+b	+c					A	8
−e	−d	CA	−c	−dp	−b	−a	CA	−f	−g									E	9
+e	+d	CC	+c	+dp	+b	+a	CC	+f	+g									C	9
−j	NC	CA	−c	−dp	−b	NC	CA	−h	−g									D	10
+j	NC	CC	+c	+dp	+b	NC	CC	+h	+g									F	10
+e	+d	+c	+dp	CC	CC	+b	+a	+g	+f									C	9
−e	−d	−c	−dp	CA	CA	−b	−a	−g	−f									E	9
−e	−d	CA	−c	−dp	−b	−a	CA	−f	−g									E	11
+e	+d	CC	+c	+dp	+b	+a	CC	+f	+g									C	11
−Mi	+Pl.Mi	−c	+bcdp	−dp	−b	+bcdp	+Pl.Mi	−Pl.	NP									D	12
+Mi	−Pl.Mi	+c	−bcdp	+dp	+b	−bcdp	−Pl.Mi	+Pl.	NP									F	12
−e	−d	CA	−c	−dp	−b	−a	CA	−f	−g									E	13
+e	+d	CC	+c	+dp	+b	+a	CC	+f	+g									C	13
−e	−d	−c	−dp	CA	−b	−a	−g	−f	CA									E	14
−c	−c	−b	−b	CA	−a	−a	−d	−d	CA									D	15
+e	+d	−c	−dp	CC	+b	+a	+g	+f	CC									C	14
+c	+c	+b	+b	CC	+a	+a	+d	+d	CC									F	15
NP	−a	−f	CA	−e	CA	−Ldp	NP	NP	−Rdp	−d	CA	−c	−g	−b	NP	CA	NP	B	16
NP	+a	+f	CC	+e	CC	+Ldp	NP	NP	+Rdp	+d	CC	+c	+g	+b	NP	CC	NP	G	16
NP	−b	+h	−h	−g	−j	+j	−dp	NP	+dp	−dp	−c	+c	+g	+d	NP	−b	NP	A	17
−a	−f	CA	NP	NP	CA	−e	−d	−dp	−c	−g	NP	−h	CA					E	18
+a	+f	CC	NP	NP	CC	+e	+d	+dp	+c	+g	NP	+b	CC					C	18
NP	−hj	NP	−g	CA	NP	NP	NP	−dp	−c	NP	NP	−b	CA					D	19
NP	+hj	NP	+g	CC	NP	NP	NP	+dp	+c	NP	NP	+b	CC					F	19

Pin Connections:
(1) + c (e.g.) First sign (+ or −) is anode or cathode, second letter (lower case) is segment (e.g.) + c = Anode segment C, −hi = Cathode segment h and
(2) + 1C (e.g.) Second number refers to digit number in 2-Digit devices.
(3) + C5 (e.g.) Second letter (capital) is column or row, final number is sequence of column or row (e.g.) + C5 = anode 5th column

CA = common anode
CC = common cathode
dp = decimal point
NC = no connection
NP = no pin

LED Numeric Displays & Dot Matrix Displays

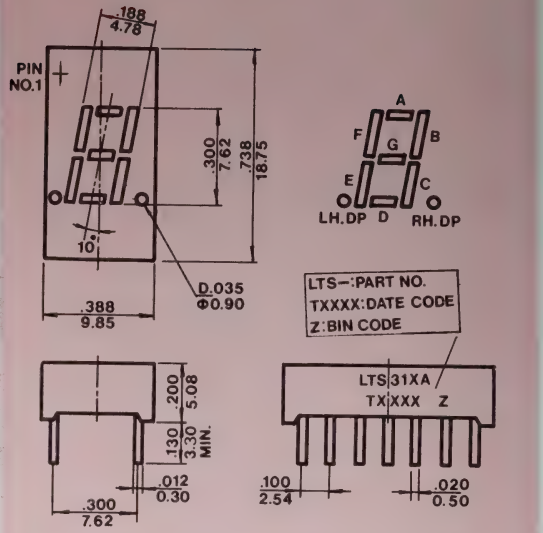
Actual Digit	Red		Bright Red		Green		Yellow		Orange		High Eff. Red	
Size	Part Number	Avg. Iv. Typ.	Part Number	Avg. Iv. Typ.	Part Number	Avg. Iv. Typ.	Part Number	Avg. Iv. Typ.	Part Number	Avg. Iv Typ.	Part Number	Avg. Iv. Typ.
0.3" 	LTD322R LTD323R	350μcd @ 10mA	LTD322P LTD323P	500μcd @ 10mA	LTD322G LTD323G	1200μcd @ 10mA	— —	— —	— —	— —	— —	— —
0.4" 	LTD432RC LTD482RC	200μcd @ 10mA	LTD432PC LTD482PC	400μcd @ 10mA	LTD432GC LTD482GC	800μcd @ 10mA	— —	— —	LTD432EC LTD482EC	800μcd @ 10mA	— —	— —
0.56" 	LTD6710R LTD6730R LTD6740R LTD6750R	500μcd @ 10mA	LTD6710P LTD6730P LTD6740P LTP6750P	700μcd @ 10mA	LTD6410G LTD6430G LTD6440G LTD6450G	2000μcd @ 10mA	LTD6810Y LTD6830Y LTD6840Y LTD6850Y	1700μcd @ 10mA	LTD6610E LTD6630E LTD6640E LTD6650E	2000μcd @ 10mA	LTD6910HR LTD6930HR LTD6940HR LTD6950HR	2000μcd @ 10mA
0.56" 3-digit 	LTC561R LTC571R	500μcd @ 10mA	LTC561P LTC571P	700μcd @ 10mA	LTC561G LTC571G	2000μcd @ 10mA	LTC561Y LTC571Y	1700μcd @ 10mA	LTC561E LTC571E	2000μcd @ 10mA	LTC561HR LTC571HR	2000μcd @ 10mA
0.5" 	LTP537R LTP587R	500μcd @ 10mA	LTP537P LTP587P	650μcd @ 10mA	LTP537G LTP587G	1900μcd @ 10mA	— —	— —	LTP537E LTP587E	1900μcd @ 10mA	LTP537HR LTP587HR	1900μcd @ 10mA
0.54" 	LTP3784R LTP3785R	400μcd @ 10mA	LTP3784P LTP3785P	550μcd @ 10mA	LTP3784G LTP3785G	1300μcd @ 10mA	— —	— —	LTP3784E LTP3785E	1300μcd @ 10mA	— —	— —
0.3" 	LTP305R	400μcd @ 10mA	— —	— —	LTP305G	1500μcd @ 10mA	—	— —	—	— —	LTP305HR LTP305HR	1500μcd @ 10mA
0.7" 	LTP747R LTP757R	450μcd @ 10mA	LTP747PR LTP757PR	600μcd @ 10mA	LTP747G LTP757G	1800μcd @ 10mA	LTP747Y LTP757Y	1300μcd @ 10mA	LTP747E LTP757E	1800μcd @ 10mA	LTP747HR LTP757HR	1800μcd @ 10mA
1.2" 	LTP1057AR LTP1157AR	500μcd @ 10mA	— —	— —	LTP1057AG LTP1157AG	2000μcd @ 10mA	LTP1057AY LTP1157AY	1700μcd @ 10mA	LTP1057AE LTP1157AE	2000μcd @ 10mA	LTP1057AHR LTP1157AHR	2000μcd @ 10mA
2.0"  (SCALE 1.2)	LTP2057AR LTP2157AR	550μcd @ 10mA	— —	— —	LTP2057AG LTP2157AG	2200μcd @ 10mA	LTP2057AY LTP2157AY	1800μcd @ 10mA	LTP2057AE LTP2157AE	2200μcd @ 10mA	LTP2057AHR LTP2157AHR	2200μcd @ 10mA

Pin Connection																	Description	Package Dimensions
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
+g −g	NP NP	+a −a	+f −f	2CC 2CA	+d −d	+e −e	+c −c	+b −b	1CC 1CA									H I	20 20
+1c −1c	+1e −1e	+1d −1d	1CC 1CA	2CC 2CA	+2d −2d	+2e −2e	+2c −2c	+2g −2g	+2a −2a	+2f −2f	+2b −2b	+1b −1b	+1f −1f	+1a −1a	+1g −1g			H I	21 21
−1e −1c +1e +1c	−1d −1d +1d +1d	−1c −1b +1c +1b	−1dp −1dp +1dp +1dp	−2e −2e +2e +2e	−2d −2d +2d +2d	−2g −2g +2g +2g	−2c −2c +2c +2c	−2dp −2dp +2dp +2dp	−2b −2b +2b +2b	−2a −2a +2a +2a	−2f −2f +2f +2f	2CA 2CA 2CC 2CC	1CA 1CA 1CC 1CC	**−1b** **−1a** **+1b** **+1a**	−1a NC +1a NC	−1g NC +1g NC	−1f NC +1f NC	E K C J	22 23 22 23
−e +e	−d +d	−dp +dp	−c +c	−g +g	**NC** **NC**	−b +b	3CA 3CC	2CA 2CC	−f +f	−a +a	1CA 1CC							E C	24 24
+b −b	+a −a	+m −m	+k −k	+h −h	+g −g	+t −t	+f −f	+e −e	+dp −dp	+s −s	+r −r	+d −d	+u −u	+p −p	+c −c	+n −n	CC CA	L M	25 25
+e +d	+m NC	NC +g	+l +c	+k 2CC	+j −Adp	+d NC	+dp 3CC	+c +Bdp	+b 4CC	2CC NC	+a +a	+n NC	+h +b	+g 1CC	1CC NC	+p +e	+f +f	L L	26 26
+C2	−R1	−R3	−R4	+C1	NP	+DP	+C3	−R7	−R6	−R5	−R2	+C5	+C4					N	27
+C1 −C1	−R3 +R3	+C2 −C2	−R5 +R5	−R6 +R6	−R7 +R7	+C4 −C4	+C5 −C5	−R4 +R4	+C3 −C3	**−R2** **+R2**	**−R1** **+R1**							N O	28 28
−R5 +R5	−R7 +R7	+C2 −C2	+C3 −C3	−R4 +R4	+C5 −C5	−R6 +R6	−R3 +R3	−R1 +R1	+C4 −C4	+C3 −C3	−R4 +R4	+C1 −C1	−R2 +R2					N O	29 29
−R5 +R5	−R7 +R7	+C2 −C2	+C3 −C3	−R4 +R4	+C5 −C5	−R6 +R6	−R3 +R3	−R1 +R1	+C4 −C4	+C3 −C3	−R4 +R4	+C1 −C1	−R1 +R2					N O	30 30

Package Dimensions

Notes:

1. All Dimensions Are In inches, Millimeters
   Tolerance Is 0.010" (0.25mm) Unless Otherwise Noted.
2. Specifications Subject To Change Without Notice.



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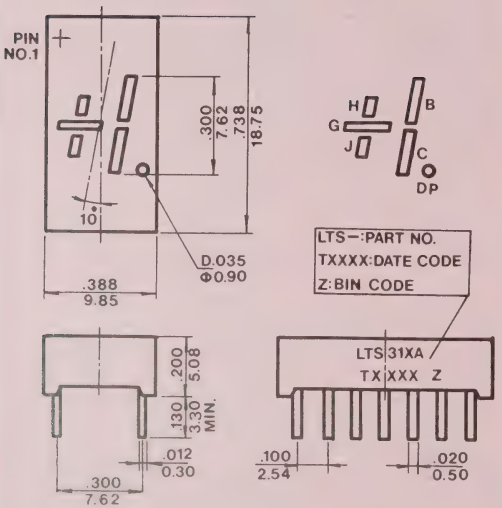

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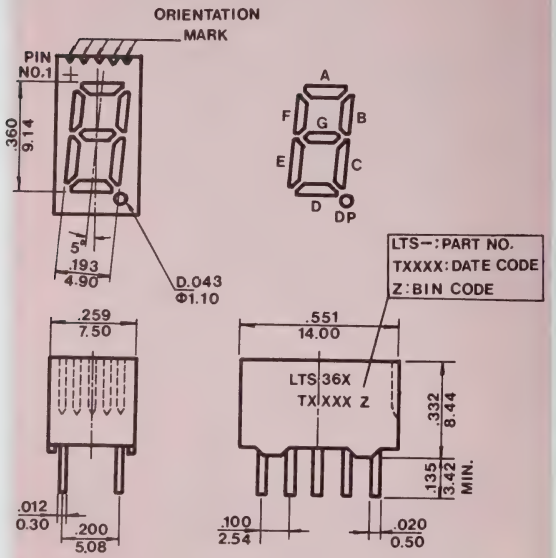

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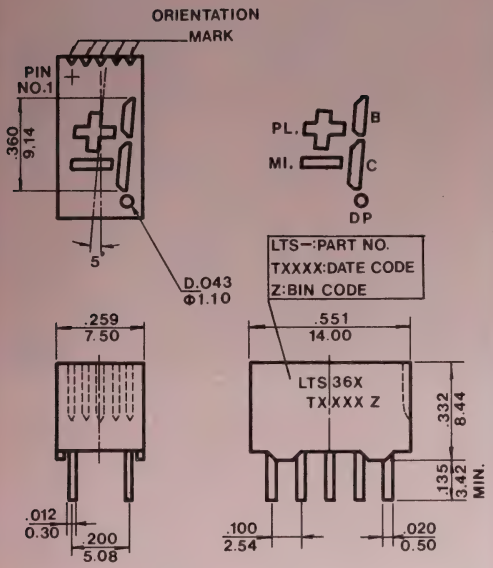
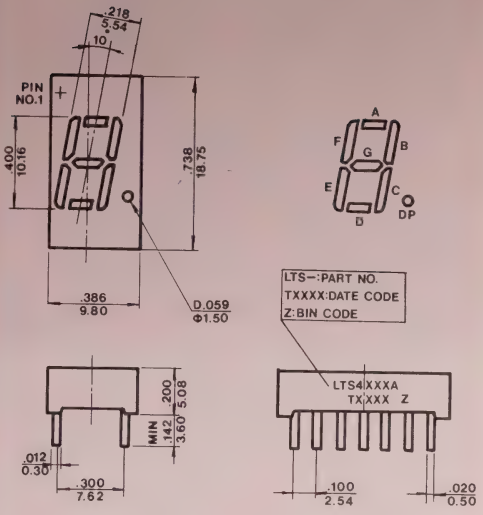
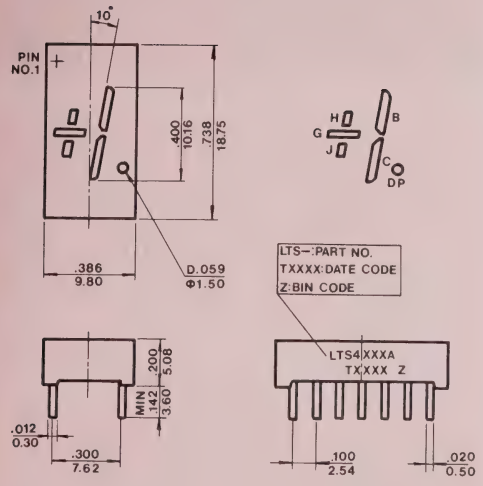

ORIENTATION MARK
PIN NO.1
.360
9.14
5°
D.043
Φ1.10
PL.
MI.
B
C
DP
LTS—:PART NO.
TXXXX:DATE CODE
Z:BIN CODE
.259
7.50
.551
14.00
LTS 36X
TXXXX Z
.332
8.44
.135
3.42
MIN.
.012
0.30
.200
5.08
.100
2.54
.020
0.50

4


.218
5.54
10°
PIN NO.1
.400
10.16
.738
18.75
.386
9.80
D.059
Φ1.50
A
F
G
B
E
C
DP
D
LTS—:PART NO.
TXXXX:DATE CODE
Z:BIN CODE
LTS4XXXA
TXXXX Z
.200
5.08
MIN
.142
3.60
.012
0.30
.300
7.62
.100
2.54
.020
0.50

5


10°
PIN NO.1
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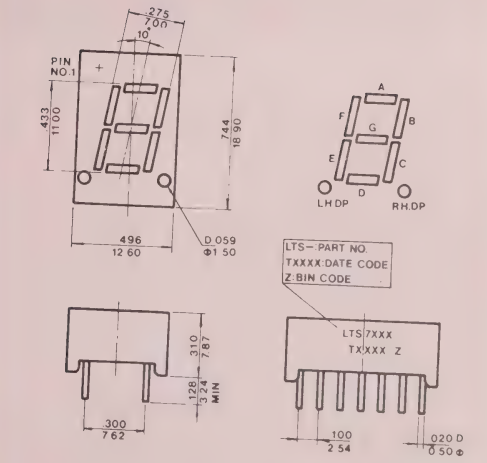
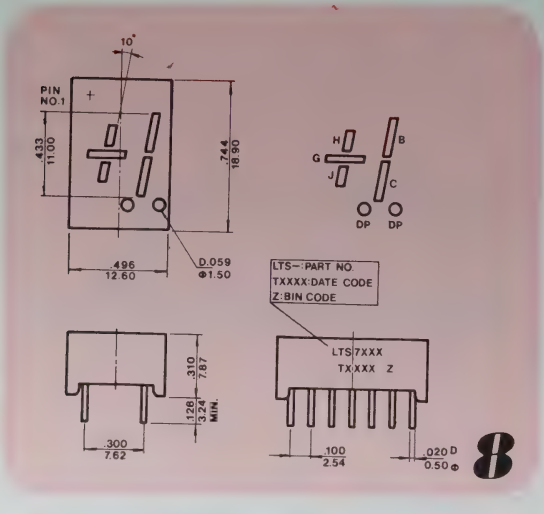
10.16
.738
18.75
G
H
J
B
C
DP
.386
9.80
D.059
Φ1.50
LTS—:PART NO.
TXXXX:DATE CODE
Z:BIN CODE
LTS4XXXA
TXXXX Z
.200
5.08
MIN
.142
3.60
.012
0.30
.300
7.62
.100
2.54
.020
0.50

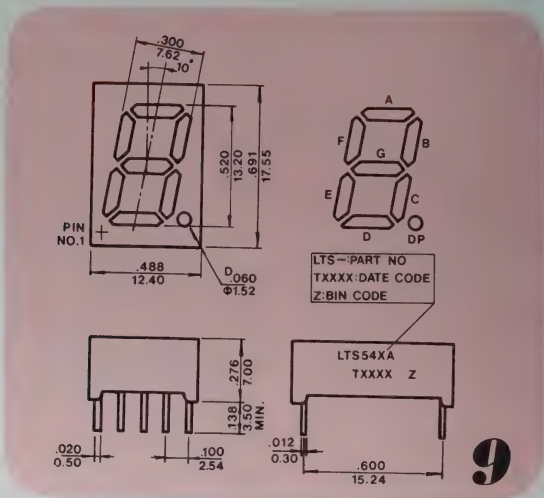
6


.275
7.00
10°
PIN NO.1
.433
11.00
.744
18.90
.496
12.60
D.059
Φ1.50
A
F
G
B
E
C
D
LH.DP
RH.DP
LTS—:PART NO.
TXXXX:DATE CODE
Z:BIN CODE
LTS7XXX
TXXXX Z
.310
7.87
.128
3.24
MIN
.300
7.62
.100
2.54
.020 D
0.50 Φ

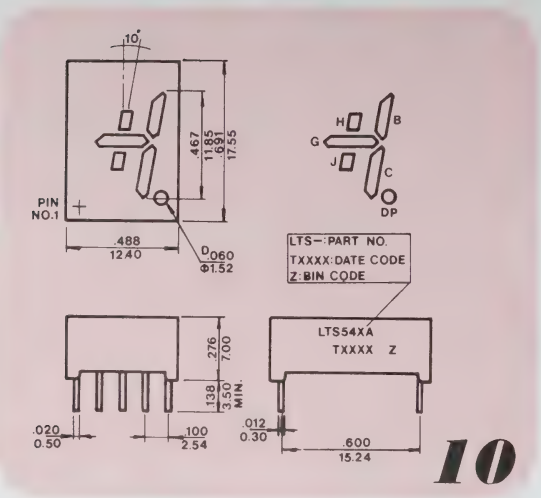
7


10°
PIN NO.1
.433 11.00
.744 18.90
.496 12.60
D.059 Φ1.50
H
G
J
B
C
DP DP
LTS-:PART NO.
TXXXX:DATE CODE
Z:BIN CODE
LTS7XXX
TXXXX Z
.310 7.87
.128 3.24 MIN.
.300 7.62
.100 2.54
.020 D 0.50 Φ

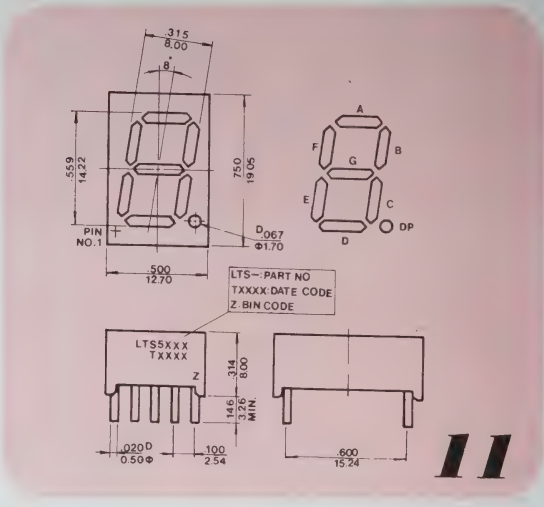
8


.300 7.62
10°
PIN NO.1
.520 13.20
.691 17.55
.488 12.40
D.060 Φ1.52
A
F
G
B
E
C
D
DP
LTS-:PART NO
TXXXX:DATE CODE
Z:BIN CODE
LTS54XA
TXXXX Z
.276 7.00
.138 3.50 MIN.
.020 0.50
.100 2.54
.012 0.30
.600 15.24

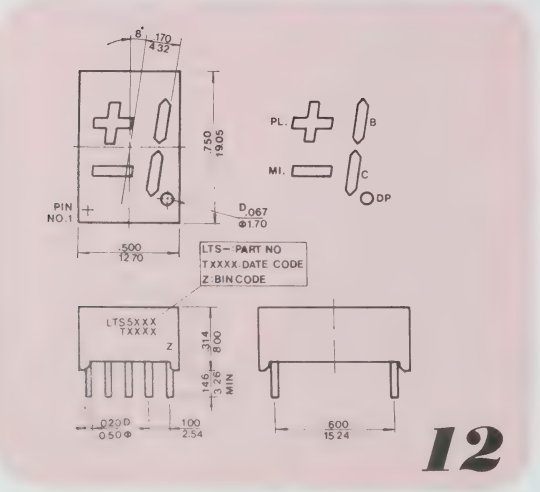
9


10°
PIN NO.1
.467 11.85
.691 17.55
.488 12.40
D.060 Φ1.52
H
G
J
B
C
DP
LTS-:PART NO.
TXXXX:DATE CODE
Z:BIN CODE
LTS54XA
TXXXX Z
.276 7.00
.138 3.50 MIN.
.020 0.50
.100 2.54
.012 0.30
.600 15.24

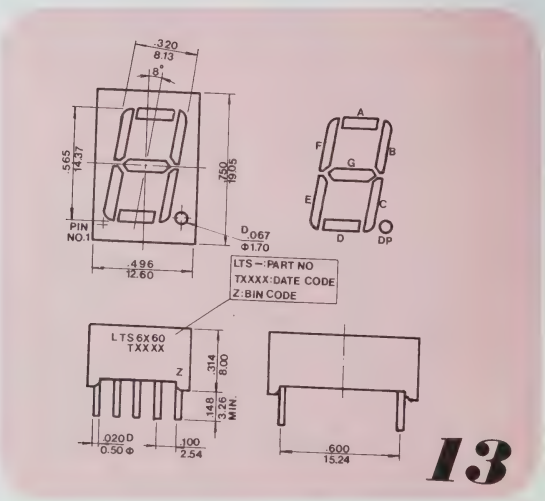
10


.315 8.00
8°
.559 14.22
.750 19.05
PIN NO.1
D.067 Φ1.70
.500 12.70
A
F
G
B
E
C
D
DP
LTS-:PART NO
TXXXX:DATE CODE
Z:BIN CODE
LTS5XXX
TXXXX
Z
.314 8.00
.146 3.70 MIN
.020D 0.50Φ
.100 2.54
.600 15.24

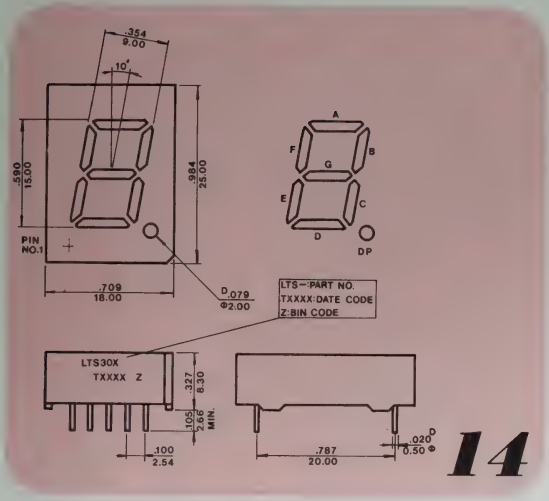
11


8°
.170 4.32
.750 19.05
PL.
MI.
B
C
DP
PIN NO.1
D.067 Φ1.70
.500 12.70
LTS- PART NO
TXXXX:DATE CODE
Z:BIN CODE
LTS5XXX
TXXXX
Z
.314 8.00
.146 3.70 MIN
.020D 0.50Φ
.100 2.54
.600 15.24

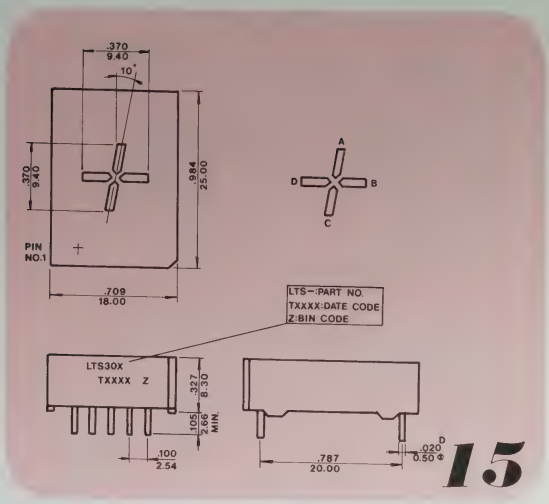
12


.320 8.13
8°
.565 14.37
.750 19.05
PIN NO.1
D.067 Φ1.70
.496 12.60
A
F
G
B
E
C
D
DP
LTS-:PART NO
TXXXX:DATE CODE
Z:BIN CODE
LTS6X60
TXXXX
Z
.314 8.00
.148 3.76 MIN.
.020D 0.50Φ
.100 2.54
.600 15.24

13



14



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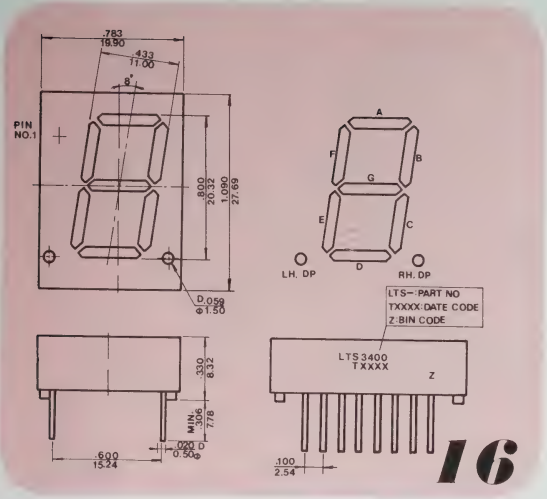
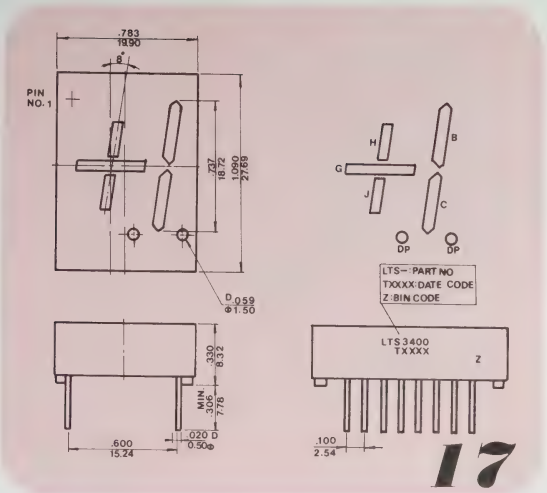
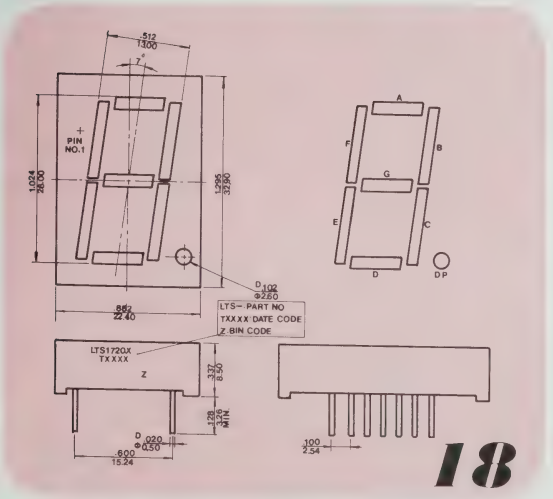


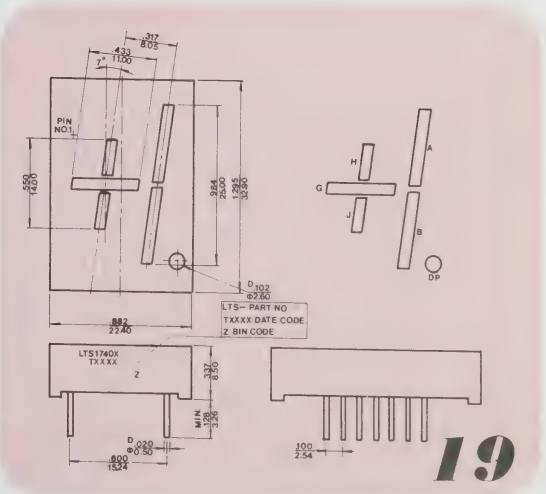
16



17

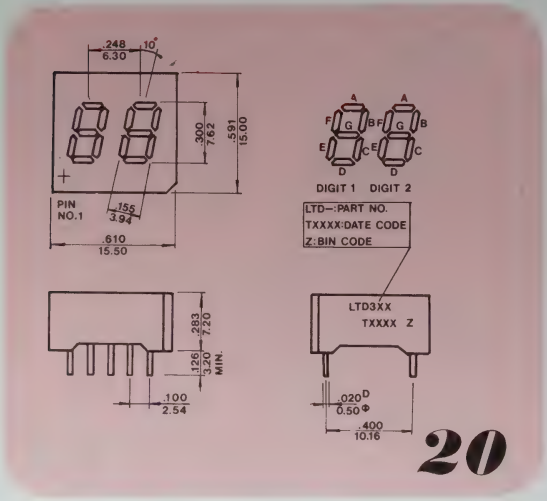


18

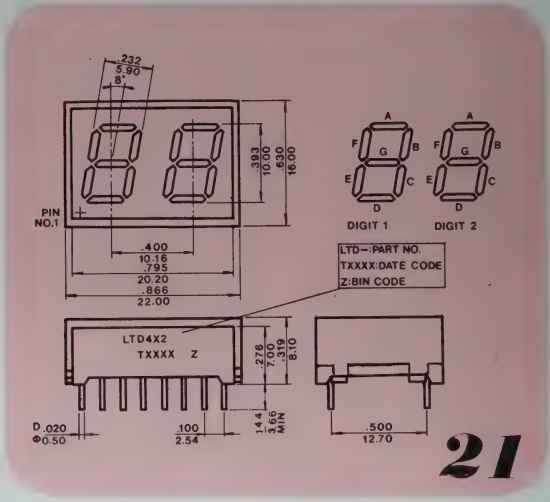


19

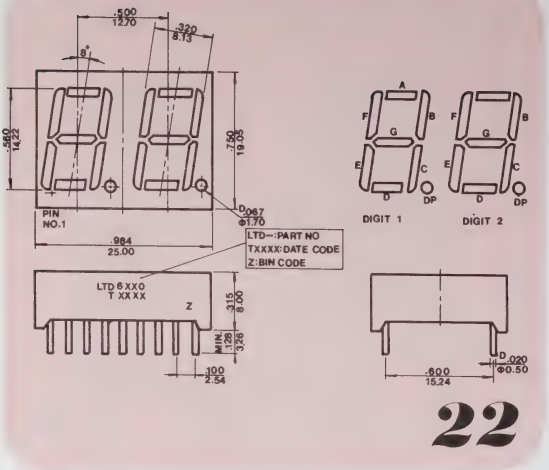
LED Numeric Displays & Dot Matrix Displays



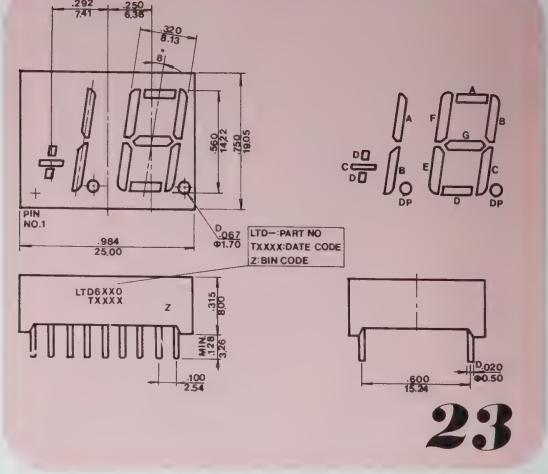
20



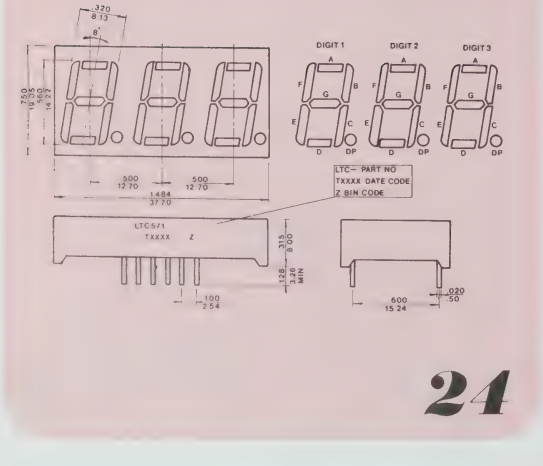
21



22



23



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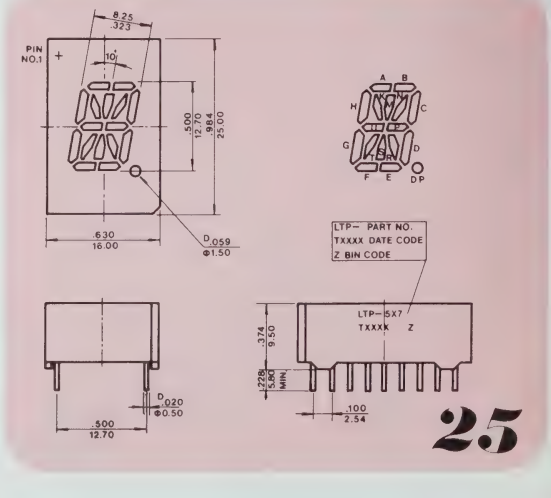

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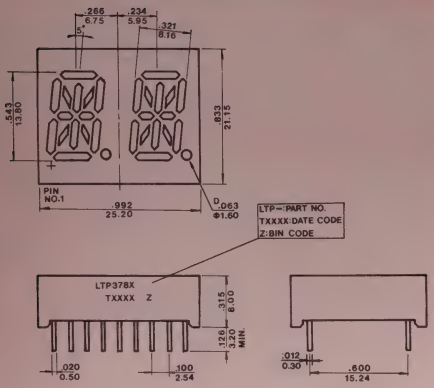
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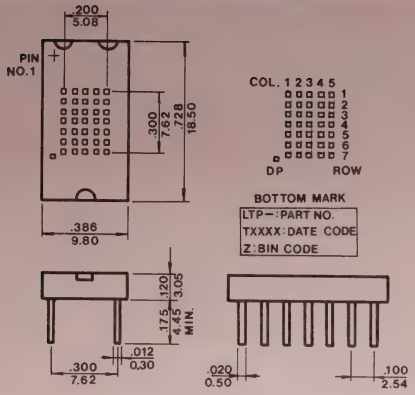
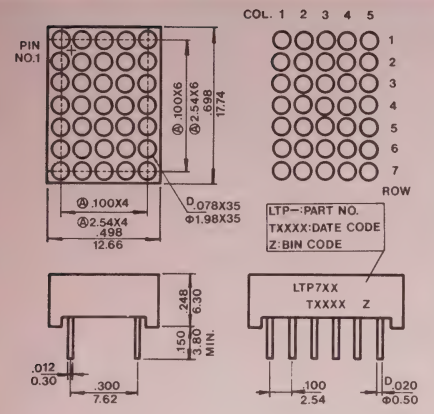
6.75
.234
5.95
.321
8.16
5°
.543
13.80
.833
21.15
PIN
NO.1
.992
25.20
D.063
Φ1.60
LTP—:PART NO.
TXXXX:DATE CODE
Z:BIN CODE
LTP378X
TXXXX Z
.315
8.00
.126
3.20
MIN.
.020
0.50
.100
2.54
.012
0.30
.600
15.24

26


.200
5.08
PIN
NO.1
.300
7.62
.728
18.50
.386
9.80
COL. 1 2 3 4 5
1
2
3
4
5
6
7
DP
ROW
BOTTOM MARK
LTP—:PART NO.
TXXXX:DATE CODE
Z:BIN CODE
.120
3.05
.175
4.45
MIN.
.300
7.62
.012
0.30
.020
0.50
.100
2.54

27


COL. 1 2 3 4 5
PIN
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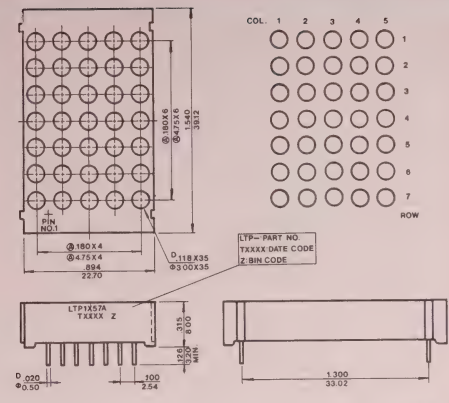
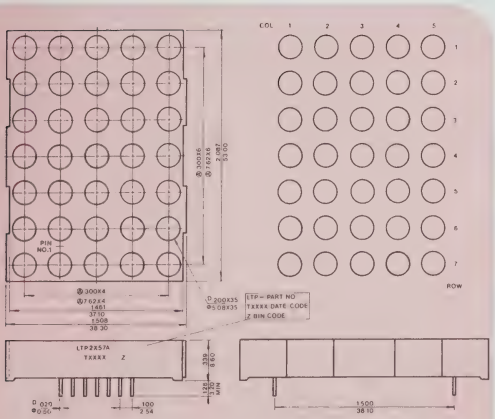
Ⓑ2.54X6
.698
17.74
Ⓐ.100X4
Ⓑ2.54X4
.498
12.66
D.078X35
Φ1.98X35
1
2
3
4
5
6
7
ROW
LTP—:PART NO.
TXXXX:DATE CODE
Z:BIN CODE
LTP7XX
TXXXX Z
.248
6.30
.150
3.80
MIN.
.012
0.30
.300
7.62
.100
2.54
D.020
Φ0.50

28


COL. 1 2 3 4 5
PIN
NO.1
Ⓐ.180X6
Ⓑ.475X6
1.540
39.12
Ⓐ.180X4
Ⓑ.475X4
.894
22.70
D.118X35
Φ3.00X35
1
2
3
4
5
6
7
ROW
LTP—:PART NO.
TXXXX:DATE CODE
Z:BIN CODE
LTP1X57A
TXXXX Z
.315
8.00
.126
3.20
MIN.
D.020
Φ0.50
.100
2.54
1.300
33.02

29


COL. 1 2 3 4 5
PIN
NO.1
Ⓐ.300X6
Ⓑ.762X6
2.087
53.00
Ⓐ.300X4
Ⓑ.762X4
1.487
37.80
1.508
38.30
D.200X35
Φ5.08X35
LTP—:PART NO.
TXXXX:DATE CODE
Z:BIN CODE
1
2
3
4
5
6
7
ROW
LTP2X57A
TXXXX Z
.315
8.00
.126
3.20
MIN.
D.020
Φ0.50
.100
2.54
1.500
38.10

30

LED Clock Displays & Multidigit Displays

Digit Height	Part Number			Description			
Inch (mm)	Bright Red	Red	Green	Drive Form Circuit and Hour Mode			Display Font
Multi-Digit Displays	LTF-804-08P	LTF-804-08	–	MPX	C.C.	FF	xx8.8.8.8.8.8.8.8.xx
	LTF-804-12P	LTF-804-12	–	MPX	C.C.	FF	8.8.8.8.8.8.8.8.8.8.8.8.
0.2" (5.0)	LTF-216141A1P	LTF-216141A1	–	MPX	C.C.	FF	x8.8.8.8.8.'''''8.8.8.8.8.x
Clock/ Frequency Displays	LTC-3137A1P-12	–	–	DUPLEX	C.C.	12	:18:88.
	LTC-3137A1P-24	–	LTC-3137A1G-24	DUPLEX	C.C.	24	88:88.
0.3" (7.62)	LTC-3197A1P-12	LTC-3197A1-12	–	DUPLEX	C.A.	12	'18 88
	–	–	LTC-3702SG	MPX	C.C.	FF	:88:8.8:
	LTC-3703SYA2	–	–	MPX	C.C.	12	:18:8.8
	–	–	LTC-3708SG	MPX	C.C.	FF	:8:8:8.8
	LTC-3768AP-12	–	LTC-3768A1G-12	DIRECT	C.C.	12	:18:88.
	LTC-3868A1P-12	–	–	DIRECT	C.C.	12	:18:88.
	–	LTC-3877	–	DIRECT	C.A.	FF	8.8.8.8.
	LTC-3881P	LTC-3881	LTC-3881G	MPX	C.C.	FF	8.8.8.8.
	LTC-3882P	LTC-3882	LTC-3882G	MPX	C.A.	FF	8.8.8.8.
0.4" (10.0)	LTC-4167A1P-12	LTC-4167A1-12	–	DIRECT	C.C.	12	'18:88
	LTC-4167A1P-24	LTC-4167A1-24	–	DIRECT	C.C.	24	88:88
	LTC-14401A1P-12	LTC-14401A1-12	–	DIRECT	C.A.	12	:188.8
0.5" (12.7)	LTC-5382A1P	–	LTC-5382A1G	MPX	C.A.	FF	+1.8.8.8.
	LTC-5382P	–	LTC-5382G	MPX	C.A.	FF	+1.8.8.8.
	LTC-5388A1P	–	LTC-5388A1G	MPX	C.C.	FF	+1.8.8.8.
	LTC-5388P	–	LTC-5388G	MPX	C.C.	FF	+1.8.8.8.
	LTC-15401A1P	–	LTC-15401A1G	DIRECT	C.A.	FF	'18:88
	LTC-15041P	–	LTC-15401G	DIRECT	C.A.	FF	'18:88
	LTC-5502A1P-12	–	–	DUPLEX	C.C.	12	:18:88.
	LTC-5703A3P	–	–	MPX	C.C.	FF	888x
	LTC-5703A1P	–	LTC-5703A1G	MPX	C.C.	FF	888x
	LTC-5703P	–	LTC-5703G	MPX	C.C.	FF	888x
	LTC-5881A3P	–	–	MPX	C.C.	FF	8.8.8.8.
	LTC-5881A1P	–	LTC-5881A1G	MPX	C.C.	FF	8.8.8.8.
	LTC-5881P	–	LTC-5881G	MPX	C.C.	FF	8.8.8.8.
	LTC-5882A3P	–	–	MPX	C.A.	FF	8.8.8.8.
	LTC-5882A1P	–	LTC-5882A1G	MPX	C.A.	FF	8.8.8.8.
	LTC-5882P	–	LTC-5882G	MPX	C.A.	FF	8.8.8.8.

Pin Connecti

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	36	
NC	– 4	– 3	NC	– 5	– 6	– 7	– 8	– 9	– 10	NC	+ A	+ B	+ C	+ D	+ DP	+ G	+ F		25
– 1	– 4	– 3	– 2	– 5	– 6	– 7	– 8	– 9	– 10	– 11	+ A	+ B	+ C	+ D	+ DP	+ G	+ F		25
+ PAD.A	– D2	– D3	– D4	– D5	+ DP	– D6	+ C	– D7	+ E	– DB	+ A	– D9	+ G	– D10	+ D	– D11	+ F		26
– PM	+ PM	NC	NC	NC	+ 1B/AM	+ 1C/2E	+ 2B/G	+ 2C/D	+ 2A/F	+ 3A/F	+ 3B/G	+ 3C/D	+ 3/4E	+ 4B/G	+ 4C/D	+ 4A/F	NC		26
NC	NC	+ 1A/D/E/	NC	NC	+ 1B	+ 1C/ + 2E	+ 2B/G	+ 2C/D	+ 2A/F	+ 3A/F	+ 3B/G	+ 3C/D	+ 3/4E	+ 4B/G	+ 4C/D	+ 4A/F	NC		26
– 2B/G	– 2C/D	– 2A/F	NC	– 3A/F	– 3B/G	– 3C/D	– 3/ – 4E	– 4B/G	– 4C/D	– 4A/F	– 1B/ – PM	– 1C/ – 2E	NC	COM + 1	COM + 2				27
+ L3	– 1	+ D	+ L2	– 2	– U/LC	+ U/LC	– 3	+ DP1	– 4	+ E	+ DP2	– UDP	– DP2	+ UDP	– DP1	+ A	+ F		27
+ AM	– 1	– U/LC,DP	– 3	+ A	+ DP	+ C	+ E	+ G	NC	+ F	+ D	+ U/LC	+ B	– 4	– 2	+ PM	– A/PM		28
+ L3	– 1	+ D	+ L2	– 2	– U/LC	+ U/LC	– 3	+ DP	– 4	+ E	+ 5	– UDP	– 5	+ UDP	– DP	+ A	+ F		28
– COM	+ PM	+ 2G	+ 2D	+ 2C	+ 2E	+ COLON	+ 3G	+ 3A/D	+ 3E	+ 3C	+ 4E	+ 4D	+ 4C	+ AL	+ 4B	+ 4A	+ 4G		29
– COM	+ PM	+ 2G	+ 2D	+ 2C	+ 2E	+ COLON	+ 3G	+ 3A/D	+ 3E	+ 3C	+ 4E	+ 4D	+ 4C	+ AL	+ 4B	+ 4A	+ 4G		30
– 1E	– 1D	– 1C	– DP1	– 2G	– 2E	– 2D	– 2C	– DP2	– 3G	– 3E	– 3D	– 3C	– DP3	– 4E	– 4D	– 4C	– DP4		30
NC	+ E	– 3	NC	NC	– 2	+ D	+ G	NC	– 3	+ B	+ A	+ F	– 4	+ DP	+ C				30
NC	– E	+ 3	NC	NC	+ 2	– D	– G	NC	+ 3	– B	– A	– F	+ 4	– DP	– C				30
+ AM	+ 1B/C	+ 2F	+ 2G	+ 2A	+ 2B	+ 2D	+ 2C	+ 2E	+ 3F	+ 3G	+ 3A/	+ 3B	+ 3E	+ 3C	+ 4F	+ 4G	+ 4A		31
+ 1B	+ 1C	+ 2F	+ 2G	+ 2A	+ 2B	+ 2D	+ 2C	+ 2E	+ 3F	+ 3G	+ 3A/D	+ 3B	+ 3E	+ 3C	+ 4F	+ 4G	+ 4A		31
– AM	– PM	– 1C	– 1B	– 2F	– 2E	– 2D	– 2C	– 2G	– 2B	– 2A	– 3A	– 3F	– 3G	– 3E	– 3D	– 3C	– 3B		32
– A	NC	– D	+ 1	– J	– H	+ 2	– C	NC	+ 3	– B	– F	– E	+ 4	– DP	– G			– PM	33
– A	NC	– D	+ 1	– J	– H	+ 2	– C	NC	+ 3	– B	– F	– E	+ 4	– DP	– G			– PM	33
+ 1G	– 1G	+ H	– J	+ 1DP	+ 2DP	+ 3DP	+ 4DP	+ D	+ C	+ B	+ A	+ E	+ F	+ G	– 1	– 2	NC	– PM	33
+ 1G	– 1G	+ H	– J	+ 1DP	+ 2DP	+ 3DP	+ 4DP	+ D	+ C	+ B	+ A	+ E	+ F	+ G	– 1	– 2	NC		34
COM +	NC	– AM	– 1A	– 1F	– 1G	– 1E	– 1D	– 1C	– 1B	– 2F	– 2G	– 2A	– 2B	– 2E	– 2D	– 2C	– UC		34
COM +	NC	– AM	– 1A	– 1F	– 1G	– 1E	– 1D	– 1C	– 1B	– 2F	– 2G	– 2A	– 2B	– 2E	– 2D	– 2C	– UC		34
– COM1	– COM2	– AM	+ AM	+ PM	+ 1B	+ 1A/G	+ 1D/E	+ 1C/ 2E	+ 2B/G	+ 2C/D	+ 2A/F	+ 3A/F	+ 3B/G	+ 3C/D	+ 3E4E	+ 4B/G	+ 4C/D		35
+ A	NC	+ D	– 1	NC	NC	– 2	+ C	NC	– 3	+ B	+ F	+ E	NC	NC	+ G				35
+ A	NC	+ D	– 1	NC	NC	– 2	+ C	NC	– 3	+ B	+ F	+ E	NC	NC	+ G				36
+ A	NC	+ D	– 1	NC	NC	– 2	+ C	NC	– 3	+ B	+ F	+ E	NC	NC	+ G				36
+ A	NC	+ D	– 1	NC	NC	– 2	+ C	NC	– 3	+ B	+ F	+ E	– 4	+ DP	+ G				37
+ A	NC	+ D	– 1	NC	NC	– 2	+ C	NC	– 3	+ B	+ F	+ E	– 4	+ DP	+ G				37
+ A	NC	+ D	– 1	NC	NC	– 2	+ C	NC	– 3	+ B	+ F	+ E	– 4	+ DP	+ G				37
– A	NC	– D	+ 1	NC	NC	+ 2	– C	NC	+ 3	– B	– F	– E	+ 4	– DP	– G				37
– A	NC	– D	+ 1	NC	NC	+ 2	– C	NC	+ 3	– B	– F	– E	+ 4	– DP	– G				38
– A	NC	– D	+ 1	NC	NC	+ 2	– C	NC	+ 3	– B	– F	– E	+ 4	– DP	– G				38

LED Clock Displays & Multidigit Displays

Digit Height	Part Number			Description			
Inch (mm)	Bright Red	Red	Green	Drive Form Circuit and Hour Mode			Display Font
Multi-Digit Displays	LTF-804-08P	LTF-804-08	–	MPX	C.C.	FF	xx8.8.8.8.8.8.8.8.xx
	LTF-804-12P	LTF-804-12	–	MPX	C.C.	FF	8.8.8.8.8.8.8.8.8.8.8.8.
0.2" (5.0)	LTF-216141A1P	LTF-216141A1	–	MPX	C.C.	FF	x8.8.8.8.8.''''8.8.8.8.8.x
Clock/ Frequency Displays	LTC-3137A1P-12	–	–	DUPLEX	C.C.	12	:18:88.
	LTC-3137A1P-24	–	LTC-3137A1G-24	DUPLEX	C.C.	24	88:88.
0.3" (7.62)	LTC-3197A1P-12	LTC-3197A1-12	–	DUPLEX	C.A.	12	'18 88
	–	–	LTC-3702SG	MPX	C.C.	FF	:88:8.8:
	LTC-3703SYA2	–	–	MPX	C.C.	12	:18:8.8
	–	–	LTC-3708SG	MPX	C.C.	FF	:8:8:8.8
	LTC-3768AP-12	–	LTC-3768A1G-12	DIRECT	C.C.	12	:18:88.
	LTC-3868A1P-12	–	–	DIRECT	C.C.	12	:18:88.
	–	LTC-3877	–	DIRECT	C.A.	FF	8.8.8.8.
	LTC-3881P	LTC-3881	LTC-3881G	MPX	C.C.	FF	8.8.8.8.
	LTC-3882P	LTC-3882	LTC-3882G	MPX	C.A.	FF	8.8.8.8.
0.4" (10.0)	LTC-4167A1P-12	LTC-4167A1-12	–	DIRECT	C.C.	12	'18:88
	LTC-4167A1P-24	LTC-4167A1-24	–	DIRECT	C.C.	24	88:88
	LTC-14401A1P-12	LTC-14401A1-12	–	DIRECT	C.A.	12	:188.8
0.5" (12.7)	LTC-5382A1P	–	LTC-5382A1G	MPX	C.A.	FF	+1.8.8.8.
	LTC-5382P	–	LTC-5382G	MPX	C.A.	FF	+1.8.8.8.
	LTC-5388A1P	–	LTC-5388A1G	MPX	C.C.	FF	+1.8.8.8.
	LTC-5388P	–	LTC-5388G	MPX	C.C.	FF	+1.8.8.8.
	LTC-15401A1P	–	LTC-15401A1G	DIRECT	C.A.	FF	'18:88
	LTC-15041P	–	LTC-15401G	DIRECT	C.A.	FF	'18:88
	LTC-5502A1P-12	–	–	DUPLEX	C.C.	12	:18:88.
	LTC-5703A3P	–	–	MPX	C.C.	FF	888x
	LTC-5703A1P	–	LTC-5703A1G	MPX	C.C.	FF	888x
	LTC-5703P	–	LTC-5703G	MPX	C.C.	FF	888x
	LTC-5881A3P	–	–	MPX	C.C.	FF	8.8.8.8.
	LTC-5881A1P	–	LTC-5881A1G	MPX	C.C.	FF	8.8.8.8.
	LTC-5881P	–	LTC-5881G	MPX	C.C.	FF	8.8.8.8.
	LTC-5882A3P	–	–	MPX	C.A.	FF	8.8.8.8.
	LTC-5882A1P	–	LTC-5882A1G	MPX	C.A.	FF	8.8.8.8.
	LTC-5882P	–	LTC-5882G	MPX	C.A.	FF	8.8.8.8.

Pin Connection

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	P.D.
NC	−4	−3	NC	−5	−6	−7	−8	−9	−10	NC	+A	+B	+C	+D	+DP	+G	+F	+E																1
−1	−4	−3	−2	−5	−6	−7	−8	−9	−10	−11	+A	+B	+C	+D	+DP	+G	+F	+E																2
+PAD.A	−D2	−D3	−D4	−D5	+DP	−D6	+C	−D7	+E	−DB	+A	−D9	+G	−D10	+D	−D11	+F	−D12	+B	−D13	−D14	−D15	−PAD.B											2
−PM	+PM	NC	NC	NC	+1B/AM	+1C/2E	+2B/G	+2C/D	+2A/F	+3A/F	+3B/G	+3C/D	+3/4E	+4B/G	+4C/D	+4A/F	NC	NC	−AL	+AL	NC	NC	NC	NC	NC	NC	+COLOM	−COMM1	−COMM2					3
NC	NC	+1A/D/E/	NC	NC	+1B	+1C/+2E	+2B/G	+2C/D	+2A/F	+3A/F	+3B/G	+3C/D	+3/4E	+4B/G	+4C/D	+4A/F	NC	NC	−AL	+AL	NC	NC	NC	NC	NC	NC	+COLOM	−COMM1	−COMM2					3
−2B/G	−2C/D	−2A/F	NC	−3A/F	−3B/G	−3C/D	−3/−4E	−4B/G	−4C/D	−4A/F	−1B/ −PM	−1C/ −2E	NC	COM +1	COM +2																			4
+L3	−1	+D	+L2	−2	−U/LC	+U/LC	−3	+DP1	−4	+E	+DP2	−UDP	−DP2	+UDP	−DP1	+A	+F	+B	+C	+1E	+G	+L1	−L1,2,3											5
+AM	−1	−U/LC,DP	−3	+A	+DP	+C	+E	+G	NC	+F	+D	+U/LC	+B	−4	−2	+PM	−A/PM																	6
+L3	−1	+D	+L2	−2	−U/LC	+U/LC	−3	+DP	−4	+E	+5	−UDP	−5	+UDP	−DP	+A	+F	+B	+C	+1E	+G	+L1	−L1,2,3											7
−COM	+PM	+2G	+2D	+2C	+2E	+COLON	+3G	+3A/D	+3E	+3C	+4E	+4D	+4C	+AL	+4B	+4A	+4G	+4F	+3B	+3F	+2B	+2A	+2F	+1B/C	+AM									8
−COM	+PM	+2G	+2D	+2C	+2E	+COLON	+3G	+3A/D	+3E	+3C	+4E	+4D	+4C	+AL	+4B	+4A	+4G	+4F	+3B	+3F	+2B	+2A	+2F	+1B/C	+AM									9
−1E	−1D	−1C	−DP1	−2G	−2E	−2D	−2C	−DP2	−3G	−3E	−3D	−3C	−DP3	−4E	−4D	−4C	−DP4	−4G	−4B	−4A	−4F	−3B	−3A	−3F	+COM	−UC	−2B	−2A	−2F	−1B	−1A	−1F	−1G	10
NC	+E	−3	NC	NC	−2	+D	+G	NC	−3	+B	+A	+F	−4	+DP	+C																			11
NC	−E	+3	NC	NC	+2	−D	−G	NC	+3	−B	−A	−F	+4	−DP	−C																			11
+AM	+1B/C	+2F	+2G	+2A	+2B	+2D	+2C	+2E	+3F	+3G	+3A/	+3B	+3E	+3C	+4F	+4G	+4A	−4B	+4E	NC	NC	NC	COM−	+4D	+4C	+COLON	NC							12
+1B	+1C	+2F	+2G	+2A	+2B	+2D	+2C	+2E	+3F	+3G	+3A/D	+3B	+3E	+3C	+4F	+4G	+4A	−4B	+4E	NC	NC	NC	COM−	+4D	+4C	+COLON	+1G							12
−AM	−PM	−1C	−1B	−2F	−2E	−2D	−2C	−2G	−2B	−2A	−3A	−3F	−3G	−3E	−3D	−3C	−3B	−DP	−4A	−4F	−4E	−4D	−4C	−4G	−4B	+COM								13
−A	NC	−D	+1	−J	−H	+2	−C	NC	+3	−B	−F	−E	+4	−DP	−G																			14
−A	NC	−D	+1	−J	−H	+2	−C	NC	+3	−B	−F	−E	+4	−DP	−G																			15
+1G	−1G	+H	−J	+1DP	+2DP	+3DP	+4DP	+D	+C	+B	+A	+E	+F	+G	−1	−2	NC	−3	−4															16
+1G	−1G	+H	−J	+1DP	+2DP	+3DP	+4DP	+D	+C	+B	+A	+E	+F	+G	−1	−2	NC	−3	−4															17
COM+	NC	−AM	−1A	−1F	−1G	−1E	−1D	−1C	−1B	−2F	−2G	−2A	−2B	−2E	−2D	−2C	−UC	−LC	−3F	−3G	−3A	−3B	−3D	−3E	−3C	−4F	−4G	−4A	−4B	−4D	−4E	−4C	+COM	18
COM+	NC	−AM	−1A	−1F	−1G	−1E	−1D	−1C	−1B	−2F	−2G	−2A	−2B	−2E	−2D	−2C	−UC	−LC	−3F	−3G	−3A	−3B	−3D	−3E	−3C	−4F	−4G	−4A	−4B	−4D	−4E	−4C	+COM	19
−COM1	−COM2	−AM	+AM	+PM	+1B	+1A/G	+1D/E	+1C/ 2E	+2B/G	+2C/D	+2A/F	+3A/F	+3B/G	+3C/D	+3E4E	+4B/G	+4C/D	+4A/F	−COM2	+AL	−AL	−COM1	+COLON											20
+A	NC	+D	−1	NC	NC	−2	+C	NC	−3	+B	+F	+E	NC	NC	+G																			21
+A	NC	+D	−1	NC	NC	−2	+C	NC	−3	+B	+F	+E	NC	NC	+G																			21
+A	NC	+D	−1	NC	NC	−2	+C	NC	−3	+B	+F	+E	NC	NC	+G																			22
+A	NC	+D	−1	NC	NC	−2	+C	NC	−3	+B	+F	+E	−4	+DP	+G																			23
+A	NC	+D	−1	NC	NC	−2	+C	NC	−3	+B	+F	+E	−4	+DP	+G																			23
+A	NC	+D	−1	NC	NC	−2	+C	NC	−3	+B	+F	+E	−4	+DP	+G																			24
−A	NC	−D	+1	NC	NC	+2	−C	NC	+3	−B	−F	−E	+4	−DP	−G																			23
−A	NC	−D	+1	NC	NC	+2	−C	NC	+3	−B	−F	−E	+4	−DP	−G																			23
−A	NC	−D	+1	NC	NC	+2	−C	NC	+3	−B	−F	−E	+4	−DP	−G																			24

LED Clock Displays & Multidigit Displays

Digit Height	Part Number			Description				Pin Connection														
Inch (mm)	Bright Red	Red	Green	Drive Form	Circuit	and Hour Mode	Display Font	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0.6″	LTC-612B1P-12	–	–	MPX	C.A.	FF	:8.8:8.8:	+PM	+AM	−AM	−PM	−A	+2	+1	−E	−D	+DP1	+DP1	+LC	−LC	NC	NC
	LTC-612D1P-12	–	–	MPX	C.A.	FF	:8.8:8.8:	+PM	+AM	−AM	−PM	−A	+2	+1	−E	−D	+DP1	+DP1	+LC	−LC	NC	NC
	LTC-617A1P	–	–	MPX	C.A.	FF	:88:88.	+AM/PM	−AM	−PM	−A	+2	+1	−E	−D	+COLON	−COLON	NC	NC	NC	NC	NC
	LTC-617D1P	–	–	MPX	C.A.	FF	:88:88.	+AM/PM	−AM	−PM	−A	+2	+1	−E	−D	+COLON	−COLON	NC	NC	NC	NC	NC
	LTC-627A1P	–	–	MPX	C.C.	FF	:88:88.	−AM/PM	+PM	+AM	+A	−2	−1	+E	+D	−COLON	+COLON	NC	NC	NC	NC	NC
	LTC-627D1P	–	–	MPX	C.C.	FF	:88:88.	−AM/PM	+PM	+AM	+A	−2	−1	+E	+D	−COLON	+COLON	NC	NC	NC	NC	NC
	LTC-637C1P-12	–	–	DUPLEX	C.C.	12	:18:88.	−COM1	−COM2	−AM	+AM	+PM	+1B	NC	NC	+1C	+2B/G	NC	+2CD	+2AF	NC	+3AF
	LTC-637C1P	–	LTC-637C1G	DUPLEX	C.C.	FF	:38:88.	−COM1	−COM2	−AM	+AM	+PM	+1B	+1A/G	+1D/E	+1C/2E	+2B/G	NC	+2CD	+2AF	NC	+3AF
	LTC-637A1P-12	–	–	DUPLEX	C.C.	12	:18:88.	−COM1	−COM2	−AM	+AM	+PM	+1B	NC	NC	+1C	+2B/G	NC	+2CD	+2AF	NC	+3AF
	LTC-637A1P	–	LTC-637A1G	DUPLEX	C.C.	FF	:38:88.	−COM1	−COM2	−AM	+AM	+PM	+1B	+1A/G	+1D/E	+1C/2E	+2B/G	NC	+2CD	+2AF	NC	+3AF
	LTC-637D1P-12	–	–	DUPLEX	C.C.	12	:18:88.	−COM1	−COM2	−AM	+AM	+PM	+1B	NC	NC	+1C	+2B/G	NC	+2CD	+2AF	NC	+3AF
	LTC-637D1P	–	LTC-637D1G	DUPLEX	C.C.	FF	:38:88.	−COM1	−COM2	−AM	+AM	+PM	+1B	+1A/G	+1D/E	+1C/2E	+2B/G	NC	+2CD	+2AF	NC	+3AF
	LTC-656TP	–	LTC-656TG	DIRECT	C.C.	FF	:88:88	−COM	+AM	+PM	+1A	+1F	+1G	+1E	+1D	+1C	+1B	+2F	+2G	+2A	+2B	+2E
	LTC-667A1P-12	–	–	DIRECT	C.C.	12	:18:88	−COM	+PM	+AM	NC	NC	NC	NC	NC	+1C	+1B	+2F	+2G	+2A	+2B	+2E
	LTC-667A1P	–	LTC-667A1G	DIRECT	C.C.	FF	:88:88	−COM	+PM	+AM	+1A	+1F	+1G	+1E	+1D	+1C	+1B	+2F	+2G	+2A	+2B	+2E
	LTC-667D1P-12	–	–	DIRECT	C.C.	12	:18:88	−COM	+PM	+AM	NC	NC	NC	NC	NC	+1C	+1B	+2F	+2G	+2A	+2B	+2E
	LTC-667D1P	–	LTC-66D1G	DIRECT	C.C.	FF	:88:88	−COM	+PM	ÅAM	+1A	+1F	+1G	+1E	+1D	+1C	+1B	+2F	+2G	+2A	+2B	+2E
	LTC-667C1P-12	–	–	DIRECT	C.C.	12	:18:88	−COM	+PM	+AM	NC	NC	NC	NC	NC	+1C	+1B	+2F	+2G	+2A	+2B	+2E
	LTC-667C1P	–	–	DIRECT	C.C.	FF	:18:88	−COM	+PM	+AM	+1A	+1F	+1G	+1E	+1D	+1C	+1B	+2F	+2G	+2A	+2B	+2E
	LTC-6703A1P	–	–	MPX	C.C.	FF	:8.8:8.8:	−PM	−AM	+AM	+PM	+A	−2	−1	+E	+D	−DP	+DP	−LC	+LC	NC	NC
	LTC-6703D1P	–	–	MPX	C.A.	FF	:8.8:8.8:	−PM	−AM	+AM	+PM	+A	−2	−1	+E	+D	−DP	+DP	−LC	+LC	NC	NC
	–	–	LTC-672A1G	DIRECT	C.A.	FF	:88:8.8:	+COM	−AM	−1A	−1F	−1E	−1D	−1C	−1G	−1B	−2A	−2F	−2E	−2D	−2C	+2G
	–	–	LTC-672D1G-12	DIRECT	C.A.	12	:18:8.8:	+COM	−AM	NC	NC	NC	NC	−1C	NC	−1B	−2A	−2F	−2E	−2D	−2C	−2G
	–	–	LTC-672D1G	DIRECT	C.A.	FF	:88:8.8:	+COM	−AM	−1A	−1F	−1E	−1D	−1C	−1G	−1B	−2A	−2F	−2E	−2D	−2C	−2G
	–	–	LTC-674A1G	DIRECT	C.A.	FF	:88:8.8'	+COM	−AM	−PM	−1G	−1F	−1E	−1D	−1C	−1B	−1A	2G	2F	2E	2D	2C
	–	–	LTC-674D1G-12	DIRECT	C.A.	12	:18:8.8'	+COM	−AM	−PM	NC	NC	NC	NC	−1C	−1B	NC	2G	2F	2E	2D	2C
	–	–	LTC-674D1G	DIRECT	C.A.	FF	:88:8.8'	+COM	−AM	−PM	−1G	−1F	−1E	−1D	−1C	−1B	−1A	2G	2F	2E	2D	2C
	LTC-677A1P	–	–	DIRECT	C.A.	FF	:88:88	+COM	−PM	−AM	−1A	−1F	−1G	−1E	−1D	−1C	−1B	−2F	−2G	−2A	−2B	−2E
	LTC-677D1P	–	–	DIRECT	C.A.	FF	:88:88	+COM	−PM	−AM	−1A	−1F	−1G	−1E	−1D	−1C	−1B	−2F	−2G	−2A	−2B	−2E
	LTC-687A1P	–	–	DUPLEX	C.A.	FF	:88:88.	+AM	+PM	−AM/PM	−1/2F	+1/3	−1/2G	−1/2E	−1/2D	−1/2C	+2/4	−1/2B	−1/2A	+UC	−UC	−LC
	LTC-687S1P	–	–	DIRECT	C.A.	FF	:88:88.	+AM	+PM	−AM/PM	−1/2F	+1	−1/2G	−1/2E	−1/2D	−1/2C	+2	−1/2B	−1/2A	+UC	−UC	−LC
	LTC-697A1P-12	–	–	DUPLEX	C.A.	12	:18:88.	+COM1	+COM2	+AM	−AM	−PM	−1B	NC	NC	−1C	−2B/G	NC	−2C/D	−2A/F	NC	−3A/F
	LTC-697A1P	–	–	DUPLEX	C.A.	FF	:38:88.	+COM1	+COM2	+AM	−AM	−PM	−1B	−1A/G	−1D/E	−C/2E	−2B/G	NC	−2C/D	−2A/F	NC	−3A/F
	LTC-697D1P-12	–	–	DUPLEX	C.A.	12	:18:88.	+COM1	+COM2	+AM	−AM	−PM	−B	NC	NC	−1C	−2B/G	NC	−2C/D	−2A/F	NC	−3A/F
	LTC-697D1P	–	–	DUPLEX	C.A.	FF	:38:88.	+COM1	+COM2	+AM	−AM	−PM	−1B	−1A/G	−1D/E	−1C/2E	−2B/G	NC	−2C/D	−2A/F	NC	−3A/F
	LTC-697C1P-12	–	–	DUPLEX	C.A.	12	:18:88.	+COM1	+COM2	+AM	−AM	−PM	−1B	NC	NC	−1C	−2B/G	NC	−2C/D	−2A/F	NC	−3A/F
	LTC-697C1P	–	–	DUPLEX	C.A.	FF	:38:88.	+COM1	+COM2	+AM	−AM	−PM	−1B	−1A/G	−1D/E	−1C/2E	−2B/G	NC	−2C/D	−2A/F	NC	−3A/F

Pin Connection

16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
NC	NC	–C	+DP2	–DP2	+3	+4	–G	–B	–F	–MHZ	–KHZ	+MHZ/KHZ	–UC	+UC							25
NC	NC	–C	+DP2	–DP2	+3	+4	–G	–B	–F	–MHZ	–KHZ	+MHZ/KHZ	–UC	+UC							25
NC	NC	NC	NC	NC	NC	–C	+3	+4	–G	–B	–F	+AL	–AL								26
NC	NC	NC	NC	NC	NC	–C	+3	+4	–G	–B	–F	+AL	–AL								26
NC	NC	NC	NC	NC	NC	+C	–3	–4	+G	+B	+F	–AL	+AL								26
NC	NC	NC	NC	NC	NC	+C	–3	–4	+G	+B	+F	–AL	+AL								26
+3BG	+3CD	+3/4E	+4BG	+4CD	+4AF	NC	NC	NC	NC	–COM2	+AL	–AL	–COM1	+COLON							27
+3BG	+3CD	+3/4E	+4BG	+4CD	+4AF	NC	NC	NC	NC	–COM2	+AL	–AL	–COM1	+COLON							27
+3BG	+3CD	+3/4E	+4BG	+4CD	+4AF	NC	NC	NC	NC	–COM2	+AL	–AL	–COM1	+COLON							28
+3BG	+3CD	+3/4E	+4BG	+4CD	+4AF	NC	NC	NC	NC	–COM2	+AL	–AL	–COM1	+COLON							28
+3BG	+3CD	+3/4E	+4BG	+4CD	+4AF	NC	NC	NC	NC	–COM2	+AL	–AL	–COM1	+COLON							28
+3BG	+3CD	+3/4E	+4BG	+4CD	+4AF	NC	NC	NC	NC	–COM2	+AL	–AL	–COM1	+COLON							28
+2D	+2C	+UC	+LC	+3F	+3G	+3A	+3B	+3D	+3E	+3C	+4F	+4G	+4A	+4B	+4E	+4D	+4C	–COM			29
+2D	+2C	+UC	+LC	+3F	+3G	+3A	+3B	+3D	+3E	+3C	+4F	+4G	+4A	+4B	+4E	+4D	+4C	–COM			30
+2D	+2C	+UC	+LC	+3F	+3G	+3A	+3B	+3D	+3E	+3C	+4F	+4G	+4A	+4B	+4E	+4D	+4C	–COM			30
+2D	+2C	+UC	+LC	+3F	+3G	+3A	+3B	+3D	+3E	+3C	+4F	+4G	+4A	+4B	+4E	+4D	+4C	–COM			30
+2D	+2C	+UC	+LC	+3F	+3G	+3A	+3B	+3D	+3E	+3C	+4F	+4G	+4A	+4B	+4E	+4D	+4C	–COM			30
+2D	+2C	+UC	+LC	+3F	+3G	+3A	+3B	+3D	+3E	+3C	+4F	+4G	+4A	+4B	+4E	+4D	+4C	–COM			31
+2D	+2C	+UC	+LC	+3F	+3G	+3A	+3B	+3D	+3E	+3C	+4F	+4G	+4A	+4B	+4E	+4D	+4C	–COM			31
NC	NC	+C	–DP2	+DP2	–3	–4	+G	+B	+F	+MHZ	+KHZ	–MHZ/KHZ	+UL	–UL							32
NC	NC	+C	–DP2	+DP2	–3	–4	+G	+B	+F	+MHZ	+KHZ	–MHZ/KHZ	+UL	–UL							32
–2B	–LC	–UC	–3A	–3F	–3E	–3D	–3C	–3G	–3B	–4A	–4F	–4E	–4D	–4C	–4G	–4B	–KHZ	–DP3	–MHZ	–PM	33
–2B	–LC –	–UC	–3A	–3F	–3E	–3D	–3C	–3G	–3B	–4A	–4F	–4E	–4D	–4C	–4G	–4B	–KHZ	–DP3	–MHZ	–PM	33
–2B	–LC	–UC	–3A	–3F	–3E	–3D	–3C	–3G	–3B	–4A	–4F	–4E	–4D	–4C	–4G	–4B	–KHZ	–DP3	–MHZ	–PM	33
2B	2A	COLON	–3G	–3F	–3E	–3D	–3C	–3B	–3A	–DP3	–4G	–4F	–4E	–4D	–4C	–4B	–4A	–MHZ			34
2B	2A	COLON	–3G	–3F	–3E	–3D	–3C	–3B	–3A	–DP3	–4G	–4F	–4E	–4D	–4C	–4B	–4A	–MHZ			34
2B	2A	COLON	–3G	–3F	–3E	–3D	–3C	–3B	–3A	–DP3	–4G	–4F	–4E	–4D	–4C	–4B	–4A	–MHZ			34
–2D	–2C	–UC	–LC	–3F	–3G	–3A	–3B	–3D	–3E	–3C	–4F	–4G	–4A	–4B	–4E	–4D	–4C	+COM	–AL		35
–2D	–2C	–UC	–LC	–3F	–3G	–3A	–3B	–3D	–3E	–3C	–4F	–4G	–4A	–4B	–4E	–4D	–4C	+COM	–AL		35
+LC	+1/3	–3/4A	–3/4F	–3/4E	–3/4D	–3/4C	–3/4G	+2/4	–3/4B	+2/4	+1/3	–AL									36
+LC	+3	–3/4A	–3/4F	–3/4E	–3/4D	–3/4C	–3/4G	+4	–3/4B	+4	+1	–AL									36
–3B/G	–3C/D	–3/4E	–4B/G	–4C/D	–4C/F	NC	NC	NC	NC	+COM2	–AL	+AL	+COM1	–COLON							37
–3B/G	–3C/D	–3/4E	–4B/G	–4C/D	–4C/F	NC	NC	NC	NC	+COM2	–AL	+AL	+COM1	–COLON							37
–3B/G	–3C/D	–3/4E	–4B/G	–4C/D	–4C/F	NC	NC	NC	NC	+COM2	–AL	+AL	+COM1	–COLON							37
–3B/G	–3C/D	–3/4E	–4B/G	–4C/D	–4C/F	NC	NC	NC	NC	+COM2	–AL	+AL	+COM1	–COLON							37
–3B/G	–3C/D	–3/4E	–4B/G	–4C/D	–4C/F	NC	NC	NC	NC	+COM2	–AL	+AL	+COM1	–COLON							38
–3B/G	–3C/D	–3/4E	–4B/G	–4C/D	–4C/F	NC	NC	NC	NC	+COM2	–AL	+AL	+COM1	–COLON							38

on

19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	P.D.
+E																1
+E																2
−D12	+B	−D13	−D14	−D15	−PAD.B											2
NC	−AL	+AL	NC	NC	NC	NC	NC	NC	+COLOM	−COMM1	−COMM2					3
NC	−AL	+AL	NC	NC	NC	NC	NC	NC	+COLOM	−COMM1	−COMM2					3
																4
+B	+C	+1E	+G	+L1	−L1,2,3											5
																6
+B	+C	+1E	+G	+L1	−L1,2,3											7
+4F	+3B	+3F	+2B	+2A	+2F	+1B/C	+AM									8
+4F	+3B	+3F	+2B	+2A	+2F	+1B/C	+AM									9
−4G	−4B	−4A	−4F	−3B	−3A	−3F	+COM	−UC	−2B	−2A	−2F	−1B	−1A	−1F	−1G	10
																11
																11
−4B	+4E	NC	NC	NC	COM−	+4D	+4C	+COLON	NC							12
−4B	+4E	NC	NC	NC	COM−	+4D	+4C	+COLON	+1G							12
−DP	−4A	−4F	−4E	−4D	−4C	−4G	−4B	+COM								13
																14
																15
−3	−4															16
−3	−4															17
−LC	−3F	−3G	−3A	−3B	−3D	−3E	−3C	−4F	−4G	−4A	−4B	−4D	−4E	−4C	+COM	18
−LC	−3F	−3G	−3A	−3B	−3D	−3E	−3C	−4F	−4G	−4A	−4B	−4D	−4E	−4C	+COM	19
+4A/F	−COM2	+AL	−AL	−COM1	+COLON											20
																21
																21
																22
																23
																23
																24
																23
																23
																24

Pin Connection

16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
NC	NC	−C	+DP2	−DP2	+3	+4	−G	−B	−F	−MHZ	−KHZ	+MHZ/KHZ	−UC	+UC							25
NC	NC	−C	+DP2	−DP2	+3	+4	−G	−B	−F	−MHZ	−KHZ	+MHZ/KHZ	−UC	+UC							25
NC	NC	NC	NC	NC	NC	−C	+3	+4	−G	−B	−F	+AL	−AL								26
NC	NC	NC	NC	NC	NC	−C	+3	+4	−G	−B	−F	+AL	−AL								26
NC	NC	NC	NC	NC	NC	+C	−3	−4	+G	+B	+F	−AL	+AL								26
NC	NC	NC	NC	NC	NC	+C	−3	−4	+G	+B	+F	−AL	+AL								26
+3BG	+3CD	+3/4E	+4BG	+4CD	+4AF	NC	NC	NC	NC	−COM2	+AL	−AL	−COM1	+COLON							27
+3BG	+3CD	+3/4E	+4BG	+4CD	+4AF	NC	NC	NC	NC	−COM2	+AL	−AL	−COM1	+COLON							27
+3BG	+3CD	+3/4E	+4BG	+4CD	+4AF	NC	NC	NC	NC	−COM2	+AL	−AL	−COM1	+COLON							28
+3BG	+3CD	+3/4E	+4BG	+4CD	+4AF	NC	NC	NC	NC	−COM2	+AL	−AL	−COM1	+COLON							28
+3BG	+3CD	+3/4E	+4BG	+4CD	+4AF	NC	NC	NC	NC	−COM2	+AL	−AL	−COM1	+COLON							28
+3BG	+3CD	+3/4E	+4BG	+4CD	+4AF	NC	NC	NC	NC	−COM2	+AL	−AL	−COM1	+COLON							28
+2D	+2C	+UC	+LC	+3F	+3G	+3A	+3B	+3D	+3E	+3C	+4F	+4G	+4A	+4B	+4E	+4D	+4C	−COM			29
+2D	+2C	+UC	+LC	+3F	+3G	+3A	+3B	+3D	+3E	+3C	+4F	+4G	+4A	+4B	+4E	+4D	+4C	−COM			30
+2D	+2C	+UC	+LC	+3F	+3G	+3A	+3B	+3D	+3E	+3C	+4F	+4G	+4A	+4B	+4E	+4D	+4C	−COM			30
+2D	+2C	+UC	+LC	+3F	+3G	+3A	+3B	+3D	+3E	+3C	+4F	+4G	+4A	+4B	+4E	+4D	+4C	−COM			30
+2D	+2C	+UC	+LC	+3F	+3G	+3A	+3B	+3D	+3E	+3C	+4F	+4G	+4A	+4B	+4E	+4D	+4C	−COM			30
+2D	+2C	+UC	+LC	+3F	+3G	+3A	+3B	+3D	+3E	+3C	+4F	+4G	+4A	+4B	+4E	+4D	+4C	−COM			31
+2D	+2C	+UC	+LC	+3F	+3G	+3A	+3B	+3D	+3E	+3C	+4F	+4G	+4A	+4B	+4E	+4D	+4C	−COM			31
NC	NC	+C	−DP2	+DP2	−3	−4	+G	+B	+F	+MHZ	+KHZ	−MHZ/KHZ	+UL	−UL							32
NC	NC	+C	−DP2	+DP2	−3	−4	+G	+B	+F	+MHZ	+KHZ	−MHZ/KHZ	+UL	−UL							32
−2B	−LC	−UC	−3A	−3F	−3E	−3D	−3C	−3G	−3B	−4A	−4F	−4E	−4D	−4C	−4G	−4B	−KHZ	−DP3	−MHZ	−PM	33
−2B	−LC −	−UC	−3A	−3F	−3E	−3D	−3C	−3G	−3B	−4A	−4F	−4E	−4D	−4C	−4G	−4B	−KHZ	−DP3	−MHZ	−PM	33
−2B	−LC	−UC	−3A	−3F	−3E	−3D	−3C	−3G	−3B	−4A	−4F	−4E	−4D	−4C	−4G	−4B	−KHZ	−DP3	−MHZ	−PM	33
2B	2A	COLON	−3G	−3F	−3E	−3D	−3C	−3B	−3A	−DP3	−4G	−4F	−4E	−4D	−4C	−4B	−4A	−MHZ			34
2B	2A	COLON	−3G	−3F	−3E	−3D	−3C	−3B	−3A	−DP3	−4G	−4F	−4E	−4D	−4C	−4B	−4A	−MHZ			34
2B	2A	COLON	−3G	−3F	−3E	−3D	−3C	−3B	−3A	−DP3	−4G	−4F	−4E	−4D	−4C	−4B	−4A	−MHZ			34
−2D	−2C	−UC	−LC	−3F	−3G	−3A	−3B	−3D	−3E	−3C	−4F	−4G	−4A	−4B	−4E	−4D	−4C	+COM	−AL		35
−2D	−2C	−UC	−LC	−3F	−3G	−3A	−3B	−3D	−3E	−3C	−4F	−4G	−4A	−4B	−4E	−4D	−4C	+COM	−AL		35
+LC	+1/3	−3/4A	−3/4F	−3/4E	−3/4D	−3/4C	−3/4G	+2/4	−3/4B	+2/4	+1/3	−AL									36
+LC	+3	−3/4A	−3/4F	−3/4E	−3/4D	−3/4C	−3/4G	+4	−3/4B	+4	+1	−AL									36
−3B/G	−3C/D	−3/4E	−4B/G	−4C/D	−4C/F	NC	NC	NC	NC	+COM2	−AL	+AL	+COM1	−COLON							37
−3B/G	−3C/D	−3/4E	−4B/G	−4C/D	−4C/F	NC	NC	NC	NC	+COM2	−AL	+AL	+COM1	−COLON							37
−3B/G	−3C/D	−3/4E	−4B/G	−4C/D	−4C/F	NC	NC	NC	NC	+COM2	−AL	+AL	+COM1	−COLON							37
−3B/G	−3C/D	−3/4E	−4B/G	−4C/D	−4C/F	NC	NC	NC	NC	+COM2	−AL	+AL	+COM1	−COLON							37
−3B/G	−3C/D	−3/4E	−4B/G	−4C/D	−4C/F	NC	NC	NC	NC	+COM2	−AL	+AL	+COM1	−COLON							38
−3B/G	−3C/D	−3/4E	−4B/G	−4C/D	−4C/F	NC	NC	NC	NC	+COM2	−AL	+AL	+COM1	−COLON							38

LED Clock Displays/ Multidigit Displays

Digit Height	Part Number			Description			
Inch (mm)	Bright Red	Red	Green	Drive Form Circuit and Hour Mode			Display Font
0.7" (18.0)	LTC-737A1P	–	–	DUPLEX	C.C.	FF	88:88.
	LTC-767A1P	–	–	DIRECT	C.C.	FF	:88:88.
0.9" (23.0)	LTC-917A1P	–	–	MPX	C.A.	FF	:88:88.
	LTC-927A1P	–	–	MPX	C.C.	FF	:88:88.
	LTC-937A1P	–	–	DUPLEX	C.C.	FF	:88:88
	LTC-937S1P-12	–	–	DUPLEX	C.C.	12	:18:88.
	LTC-937S1P	–	–	DUPLEX	C.C.	FF	:88:88.
	LTC-967S1P	–	–	DIRECT	C.C.	FF	:88:88.
1.4" (35.6)	LTC-14301A1P-12	–	–	DIRECT	C.C.	12	·18:88
1.5" (38.1)	LTC-115402A1P-12	–	–	DIRECT	C.C.	12	·18:88.
	LTC-115402A1P	–	–	DIRECT	C.C.	FF	88:88.
1.8" (45.7)	LTC-18501A1P-12	–	–	DUPLEX	C.C.	12	:18:88.
	LTC-18501A1P	–	–	DUPLEX	C.C.	FF	:88:88.
	LTC-1867TA1P-12	–	–	DIRECT	C.C.	12	·18:88.
MAGNIFIED ARRAY	LTB-0022	–	–	MPX	C.C.	FF	8x8
	LTB-0028	–		MPX	C.C.	FF	8.8.x
	LTB-0038	–	–	MPX	C.C.	FF	8.8.8.
	LTB-0047		–	MPX	C.C.	FF	8888
	LTB-1466	–		MPX	C.C.	FF	xx88888.8x
	LTB-1478	–	–	MPX	C.C.	FF	x8.8.8.8.8.8.8.
	LTB-1488	–	–	MPX	C.C.	FF	x8.8.8.8.8.8.8.8.
	LTB-1498	–	–	MPX	C.C.	FF	8.8.8.8.8.8.8.8.8.
BAR GRAPH DISPLAY	LTA-1000P	LTA-1000R	LTA-1000G	DIRECT		FF	▯▯▯▯▯▯▯▯▯▯
	LTA-8101P	–	LTA-8101G	DIRECT	C.A.	FF	▭▭▭▭▭▭▭▭▭▭
	LTA-8051P	–	LTA-8051G	DIRECT	C.A.	FF	▭▭▭▭▭

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
-COM1	-COM2	NC	NC	NC	+1B	+1A/G	+1D/E	+1C/2E	+2B/G	NC	+2C/D	+2A/F	NC	+3A/F	+3B/G	+3C/D	+3/4E	+4B/G	+4C/D
-COM	+AM	+PM	+1A	+1F	+1G	+1E	+1D	+1C	+1B	+2F	+2G	+2A	+2B	+2D	+2C	+2E	+UC	+LC	+3F
-PM	+PM	+AM	-AM	-A	+2	+1	-E	-D	+COLON	-COLON	NC	NC	NC	NC	NC	NC	NC	NC	NC
+PM	-PM	-AM	+AM	+A	-2	-1	+E	+D	-COLON	+COLON	NC	NC	NC	NC	NC	NC	NC	NC	NC
-COM1	-COM2	-AM	+AM	+PM	+1B	+1A/G	+1D/E	+1C/2E	+2B/G	NC	+2CD	+2AF	NC	+3AF	+3BG	+3CD	+3/4E	+4BG	+4CD
-COM1	-COM2	-AM	+AM	+PM	+1B	NC	NC	+1C	+2B/G	NC	+2CD	+2AF	NC	+3AF	+3BG	+3CD	+3/4E	+4BG	+4CD
-COM1	-COM2	-AM	+AM	+PM	+1B	+1A/G	+1D/E	+1C/2E	+2B/G	NC	+2CD	+2AF	NC	+3AF	+3BG	+3CD	+3/4E	+4BG	+4CD
+AM/PM	-1/2COM	NC	NC	+1A	+1F	+1G	+1E	+1D	+1C	+1B	+2F	+2G	+2A	+2B	+2E	+2D	NC	+2C	+UC
+AM	-COM	NC	NC	+1C	NC	NC	+1B	NC	+2F	+2G	+2A	+2B	+2E	+2D	+2C	+LC	NC	NC	NC
+AM	-COM	NC	NC	+1C	NC	NC	+1B	NC	+2F	+2G	+2A	+2B	+2E	+2D	+2C	+LC	NC	NC	NC
+AM	-COM	+1E	+1D	+1C	+1G	+1F	+1B	+1A	+2F	+2G	+2A	+2B	+2E	+2D	+2C	+LC	NC	NC	NC
-COM1	-COM2	-AM	+AM	+PM	+1B	NC	NC	+1C	+2B/G	NC	+2CD	+2AF	NC	+3AF	+3BG	+3CD	+3/4E	+4BG	+4CD
-COM1	-COM2	-AM	+AM	+PM	+1B	+1A/G	+1D/E	+1C/2E	+2B/G	NC	+2CD	+2AF	NC	+3AF	+3BG	+3CD	+3/4E	+4BG	+4CD
+PM	-COM	NC	NC	+1C	NC	NC	+1B	NC	+2F	+2G	+2A	+2B	+2E	+2D	+2C	+LC	NC	NC	NC
-1	NC	+E	+C	+D	NC	-3	+G	+F	+B	+A									
NC	-2	+E	+C	+D	+DP	-3	+G	+F	+B	+A									
-1	-2	+E	+C	+D	+DP	-3	+G	+F	+B	+A									
+B	+G	+D	NC	-1	-2	-3	-4	+C	+E	+F	+A								
NC	NC	+C	NC	+DP	-1	+A	-2	+E	-3	+D	-4	+G	-5	+B	-6	+F	NC		
NC	NC	-C	-1	+DP	-2	+A	-3	+E	-4	+D	-5	+G	-6	+B	-7	+F	NC		
NC	NC	+C	-1	+DP	-2	+A	-3	+E	-4	+D	-5	+G	-6	+B	-7	+F	-8		
NC	-1	+C	-2	+DP	-3	+A	-4	+E	-5	+D	-6	+G	-7	+B	-8	+F	-9		
+A	+B	+C	+D	+E	+F	+G	+H	+J	+K	-K	-J	-H	-G	-F	-E	-D	-C	-B	-A
+COM	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	+COM								
+COM	-1	-2	-3	-4	-5	+COM													

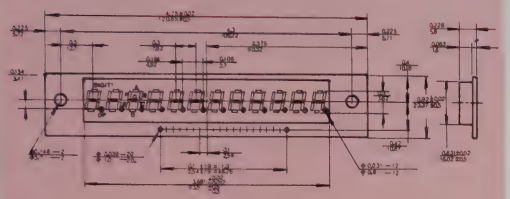
LED Clock Displays/ Multidigit Displays

Digit Height	Part Number			Description			
				Drive Form Circuit and Hour Mode			Display Font
Inch (mm)	Bright Red	Red	Green				
0.7" (18.0)	LTC-737A1P	–	–	DUPLEX	C.C.	FF	88:88.
	LTC-767A1P	–	–	DIRECT	C.C.	FF	:88:88.
0.9" (23.0)	LTC-917A1P	–	–	MPX	C.A.	FF	:88:88.
	LTC-927A1P	–	–	MPX	C.C.	FF	:88:88.
	LTC-937A1P	–	–	DUPLEX	C.C.	FF	:88:88
	LTC-937S1P-12	–	–	DUPLEX	C.C.	12	:18:88.
	LTC-937S1P	–	–	DUPLEX	C.C.	FF	:88:88.
	LTC-967S1P	–	–	DIRECT	C.C.	FF	:88:88.
1.4" (35.6)	LTC-14301A1P-12	–	–	DIRECT	C.C.	12	'18:88
1.5" (38.1)	LTC-115402A1P-12	–	–	DIRECT	C.C.	12	'18:88.
	LTC-115402A1P	–	–	DIRECT	C.C.	FF	88:88.
1.8" (45.7)	LTC-18501A1P-12	–	–	DUPLEX	C.C.	12	:18:88.
	LTC-18501A1P	–	–	DUPLEX	C.C.	FF	:88:88.
	LTC-1867TA1P-12	–	–	DIRECT	C.C.	12	'18:88.
MAGNIFIED ARRAY	LTB-0022	–	–	MPX	C.C.	FF	8x8
	LTB-0028	–	-	MPX	C.C.	FF	8.8.x
	LTB-0038	–	–	MPX	C.C.	FF	8.8.8.
	LTB-0047	–	–	MPX	C.C.	FF	8888
	LTB-1466	–	–	MPX	C.C.	FF	xx88888.8x
	LTB-1478	–	–	MPX	C.C.	FF	x8.8.8.8.8.8.8.
	LTB-1488	–	–	MPX	C.C.	FF	x8.8.8.8.8.8.8.8.
	LTB-1498	-	-	MPX	C.C.	FF	8.8.8.8.8.8.8.8.8.
BAR GRAPH DISPLAY	LTA-1000P	LTA-1000R	LTA-1000G	DIRECT		FF	
	LTA-8101P	–	LTA-8101G	DIRECT	C.A.	FF	
	LTA-8051P	–	LTA-8051G	DIRECT	C.A.	FF	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
−COM1	−COM2	NC	NC	NC	+1B	+1A/G	+1D/E	+1C/2E	+2B/G	NC	+2C/D	+2A/F	NC	+3A/F	+3B/G	+3C/D	+3/4E	+4B/G	+4C/D	+4A/F	NC	NC	NC	NC	−COM2	+AL	−AL	−COM1	+COLON							39
−COM	+AM	+PM	+1A	+1F	+1G	+1E	+1D	+1C	+1B	+2F	+2G	+2A	+2B	+2D	+2C	+2E	+UC	+LC	+3F	+3G	+3A/D	+3B	+3E	+3C	+4F	+4G	+4A	+4B	+4E	+4D	+4C	+AL	−COM			40
−PM	+PM	+AM	−AM	−A	+2	+1	−E	−D	+COLON	−COLON	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	−C	+3	+4	−G	−B	−F	+AL	−AL							41
+PM	−PM	−AM	+AM	+A	−2	−1	+E	+D	−COLON	+COLON	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	+C	−3	−4	+G	+B	+F	−AL	+AL							41
−COM1	−COM2	−AM	+AM	+PM	+1B	+1A/G	+1D/E	+1C/2E	+2B/G	NC	+2CD	+2AF	NC	+3AF	+3BG	+3CD	+3/4E	+4BG	+4CD	+4AF	NC	NC	NC	NC	−COM2	+AL	−AL	−COM1	+COLON							42
−COM1	−COM2	−AM	+AM	+PM	+1B	NC	NC	+1C	+2B/G	NC	+2CD	+2AF	NC	+3AF	+3BG	+3CD	+3/4E	+4BG	+4CD	+4AF	NC	NC	NC	NC	−COM2	+AL	−AL	−COM1	+COLON							43
−COM1	−COM2	−AM	+AM	+PM	+1B	+1A/G	+1D/E	+1C/2E	+2B/G	NC	+2CD	+2AF	NC	+3AF	+3BG	+3CD	+3/4E	+4BG	+4CD	+4AF	NC	NC	NC	NC	−COM2	+AL	−AL	−COM1	+COLON							43
+AM/PM	−1/2COM	NC	NC	+1A	+1F	+1G	+1E	+1D	+1C	+1B	+2F	+2G	+2A	+2B	+2E	+2D	NC	+2C	+UC	+LC	+3F	+3G	+3A	+3B	+3D	+3E	+3C	+4F (Pin No. 37 To 42)	+4G (Pin No. 37 To 42)	+4A +AL	+4B	+4E	+4D	+4C	−3/4COM	44
+AM	−COM	NC	NC	+1C	NC	NC	+1B	NC	+2F	+2G	+2A	+2B	+2E	+2D	+2C	+LC	NC	NC	NC	NC	NC	NC	NC	NC	+UC	+3F	+3G	+3A (Pin No. 37 To 42)	+3B (Pin No. 37 To 42)	+3E +4B	+3D +4E	+3C +4D	+4F +4C	+4G −COM	+4A +AL	45
+AM	−COM	NC	NC	+1C	NC	NC	+1B	NC	+2F	+2G	+2A	+2B	+2E	+2D	+2C	+LC	NC	NC	NC	NC	NC	NC	NC	NC	+UC	+3F	+3G	+3A (Pin No. 37 to 42)	+3B (Pin No. 37 To 42)	+3E +4B	+3D +4E	+3C +4D	+4F +4C	+4G −COM	+4A +AL	46
+AM	−COM	+1E	+1D	+1C	+1G	+1F	+1B	+1A	+2F	+2G	+2A	+2B	+2E	+2D	+2C	+LC	NC	NC	NC	NC	NC	NC	NC	NC	+UC	+3F	+3G	+3A (Pin No. 37 To 42)	+3B (Pin No. 37 To 42)	+3E +4B	+3D +4E	+3C +4D	+4F +4C	+4G −COM	+4A +AL	46
−COM1	−COM2	−AM	+AM	+PM	+1B	NC	NC	+1C	+2B/G	NC	+2CD	+2AF	NC	+3AF	+3BG	+3CD	+3/4E	+4BG	+4CD	+4AF	NC	NC	NC	NC	−COM2	+AL	−AL	−COM1	+COLON							47
−COM1	−COM2	−AM	+AM	+PM	+1B	+1A/G	+1D/E	+1C/2E	+2B/G	NC	+2CD	+2AF	NC	+3AF	+3BG	+3CD	+3/4E	+4BG	+4CD	+4AF	NC	NC	NC	NC	−COM2	+AL	−AL	−COM1	+COLON							47
+PM	−COM	NC	NC	+1C	NC	NC	+1B	NC	+2F	+2G	+2A	+2B	+2E	+2D	+2C	+LC	NC	NC	NC	NC	NC	NC	NC	NC	+UC	+3F	+3G	+3A (Pin No. 37 To 42)	+3B (Pin No. 37 To 42)	+3E +4B	+3D +4E	+3C +4D	+4F +4C	+4G −COM	+4A +AL	48
−1	NC	+E	+C	+D	NC	−3	+G	+F	+B	+A																										49
NC	−2	+E	+C	+D	+DP	−3	+G	+F	+B	+A																										49
−1	−2	+E	+C	+D	+DP	−3	+G	+F	+B	+A																										49
+B	+G	+D	NC	−1	−2	−3	−4	+C	+E	+F	+A																										50
NC	NC	+C	NC	+DP	−1	+A	−2	+E	−3	+D	−4	+G	−5	+B	−6	+F	NC																				51
NC	NC	−C	−1	+DP	−2	+A	−3	+E	−4	+D	−5	+G	−6	+B	−7	+F	NC																				51
NC	NC	+C	−1	+DP	−2	+A	−3	+E	−4	+D	−5	+G	−6	+B	−7	+F	−8																				51
NC	−1	+C	−2	+DP	−3	+A	−4	+E	−5	+D	−6	+G	−7	+B	−8	+F	−9																				51
+A	+B	+C	+D	+E	+F	+G	+H	+J	+K	−K	−J	−H	−G	−F	−E	−D	−C	−B	−A																		52
+COM	−1	−2	−3	−4	−5	−6	−7	−8	−9	−10	+COM																										53
+COM	−1	−2	−3	−4	−5	+COM																															54

Package Dimensions

Notes: 1. All Dimensions Are In Millimeters Tolerance Is (0.25mm) Unless Otherwise Noted.
2. Specifications Subject To Change Without Notice.



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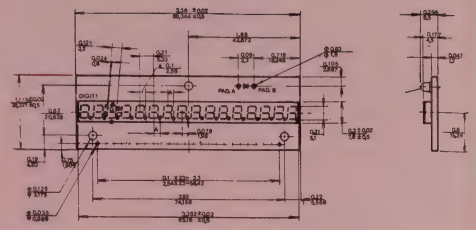

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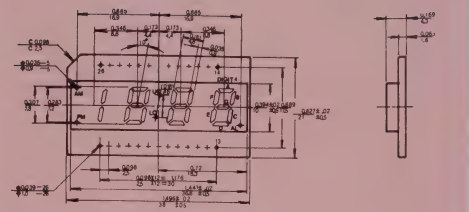

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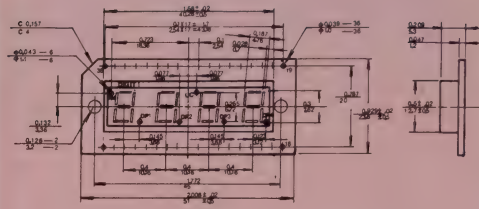

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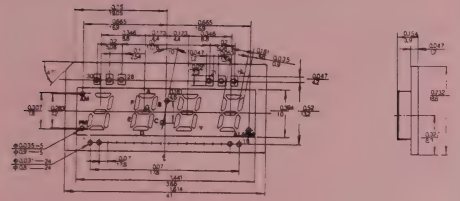

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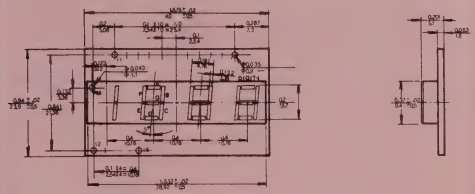

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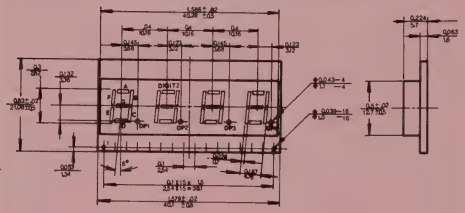

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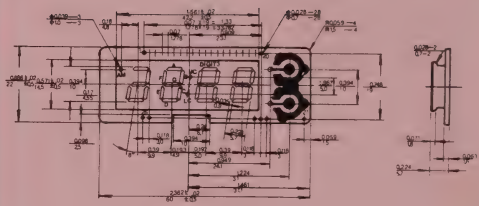

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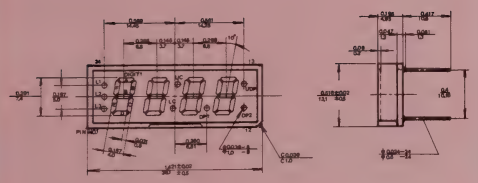

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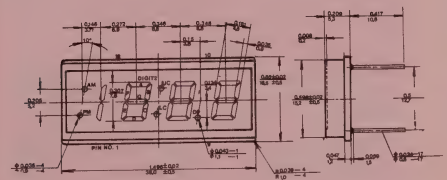

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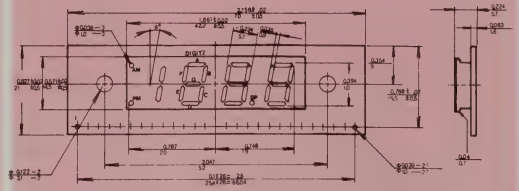

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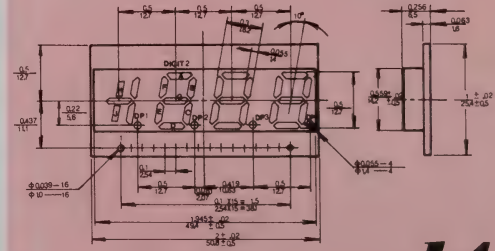

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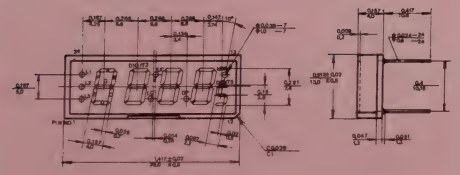

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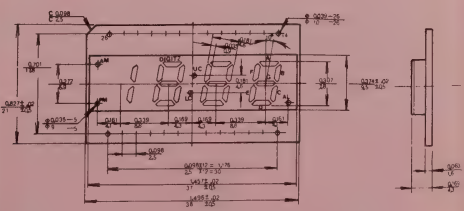

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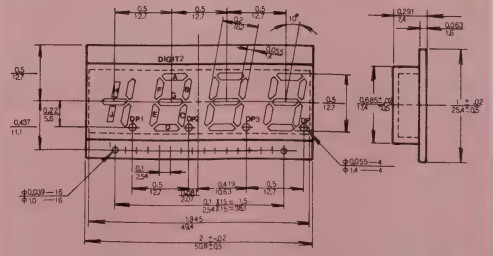

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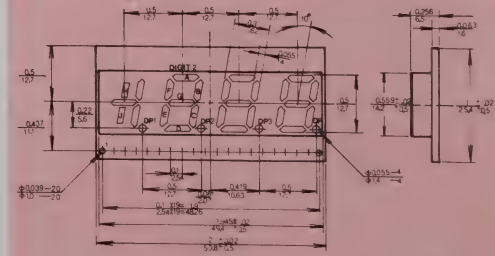

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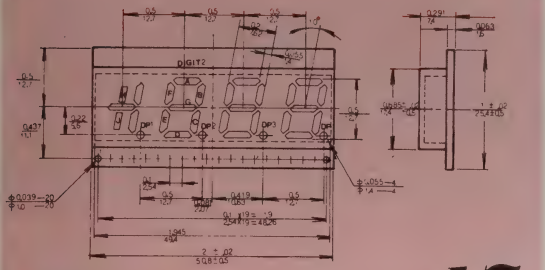

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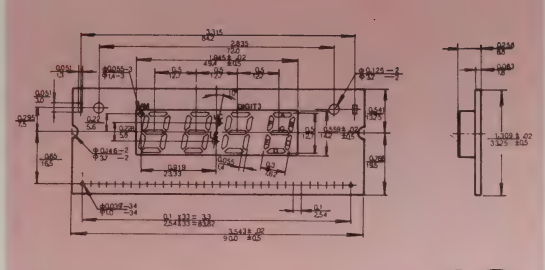

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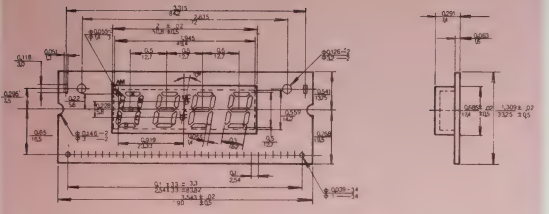

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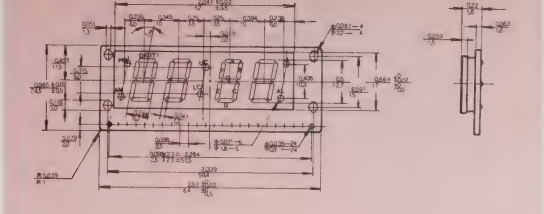

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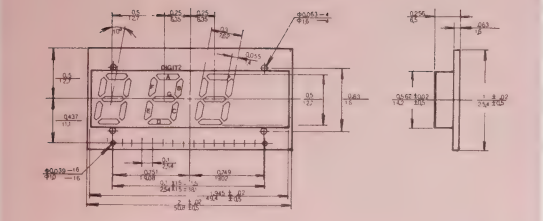

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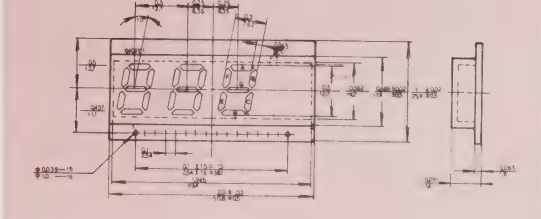

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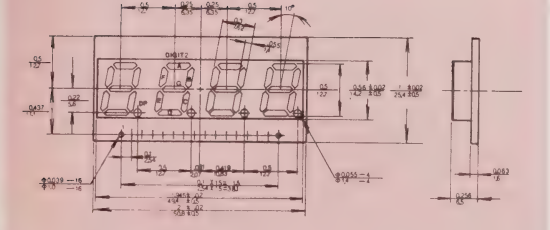

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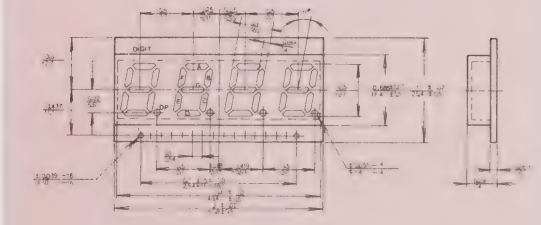

24

21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
+4A/F	NC	NC	NC	NC	−COM2	+AL	−AL	−COM1	+COLON							39
+3G	+3A/D	+3B	+3E	+3C	+4F	+4G	+4A	+4B	+4E	+4D	+4C	+AL	−COM			40
NC	NC	−C	+3	+4	−G	−B	−F	+AL	−AL							41
NC	NC	+C	−3	−4	+G	+B	+F	−AL	+AL							41
+4AF	NC	NC	NC	NC	−COM2	+AL	−AL	−COM1	+COLON							42
+4AF	NC	NC	NC	NC	−COM2	+AL	−AL	−COM1	+COLON							43
+4AF	NC	NC	NC	NC	−COM2	+AL	−AL	−COM1	+COLON							43
+LC	+3F	+3G	+3A	+3B	+3D	+3E	+3C	+4F (Pin No. 37 To 42)	+4G	+4A +AL	+4B	+4E	+4D	+4C	−3/4COM	44
NC	NC	NC	NC	NC	+UC	+3F	+3G	+3A (Pin No. 37 To 42)	+3B	+3E +4B	+3D +4E	+3C +4D	+4F +4C	+4G −COM	+4A +AL	45
NC	NC	NC	NC	NC	+UC	+3F	+3G	+3A (Pin No. 37 to 42)	+3B	+3E +4B	+3D +4E	+3C +4D	+4F +4C	+4G −COM	+4A +AL	46
NC	NC	NC	NC	NC	+UC	+3F	+3G	+3A (Pin No. 37 To 42)	+3B	+3E +4B	+3D +4E	+3C +4D	+4F +4C	+4G −COM	+4A +AL	46
+4AF	NC	NC	NC	NC	−COM2	+AL	−AL	−COM1	+COLON							47
+4AF	NC	NC	NC	NC	−COM2	+AL	−AL	−COM1	+COLON							47
NC	NC	NC	NC	NC	+UC	+3F	+3G	+3A (Pin No. 37 To 42)	+3B	+3E +4B	+3D +4E	+3C +4D	+4F +4C	+4G −COM	+4A +AL	48
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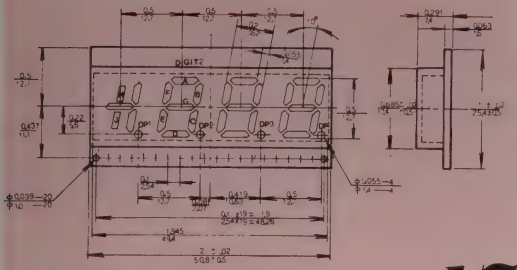

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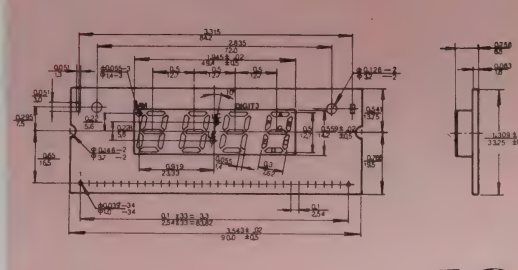

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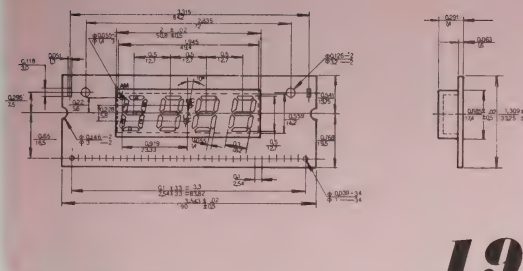

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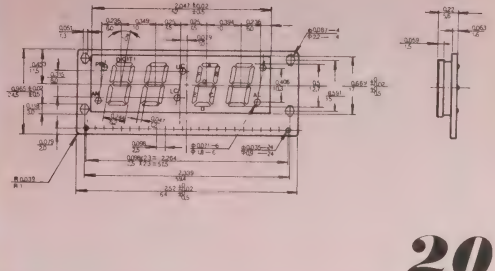

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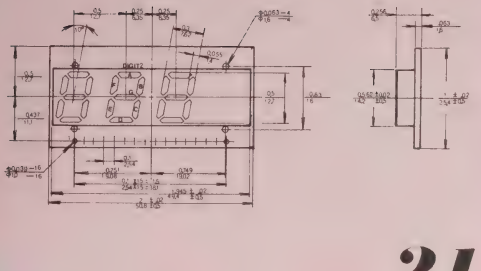

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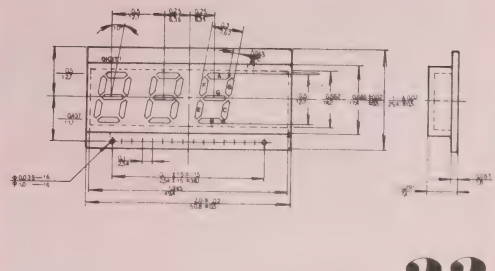

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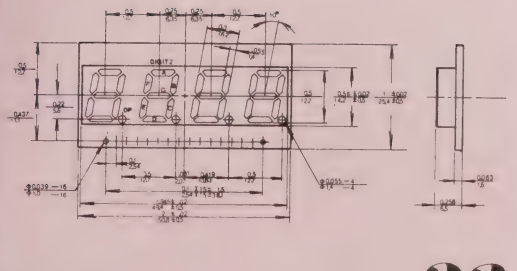

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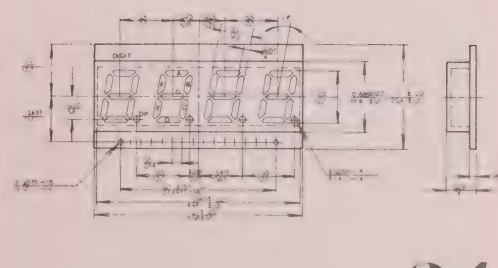

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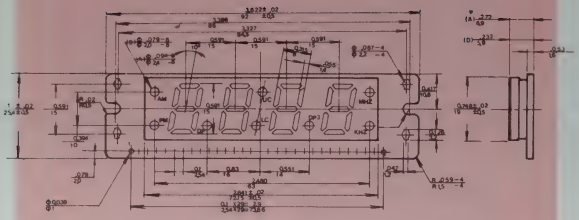

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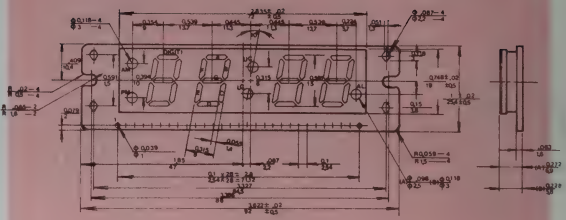

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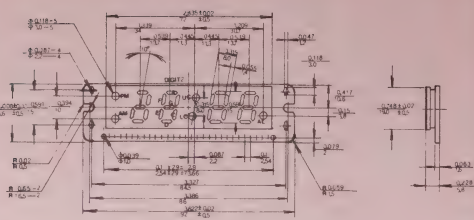

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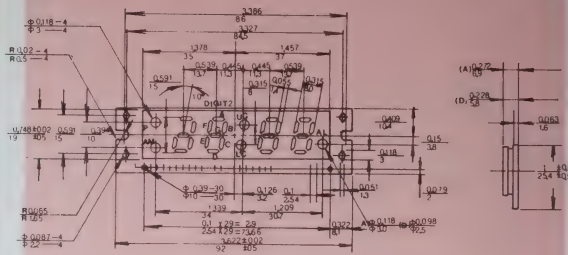

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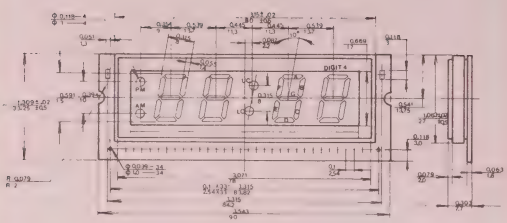

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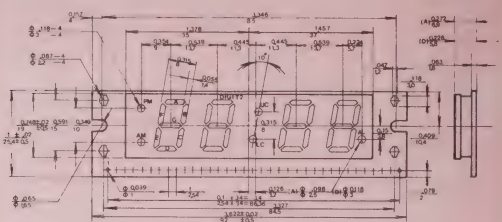

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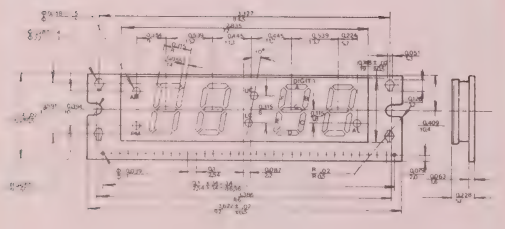

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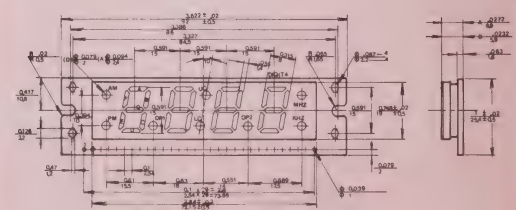

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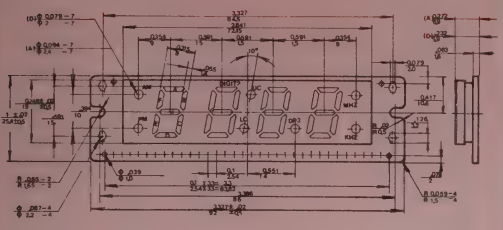

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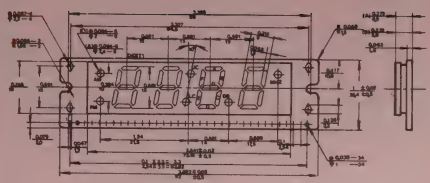

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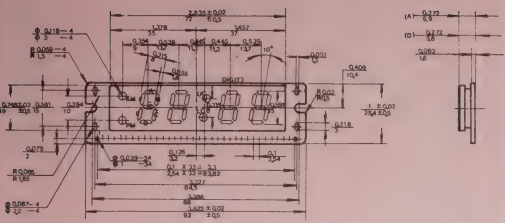

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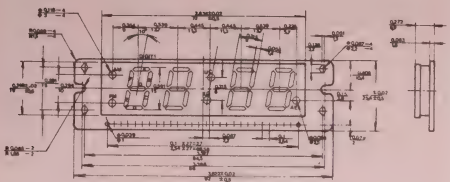

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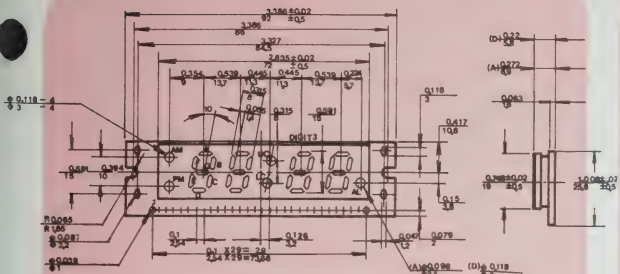

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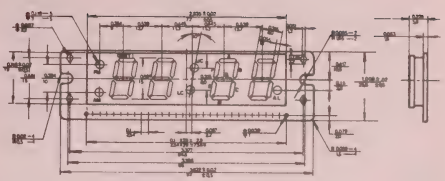

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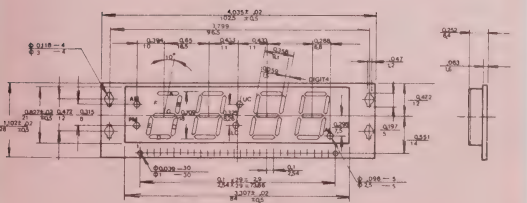

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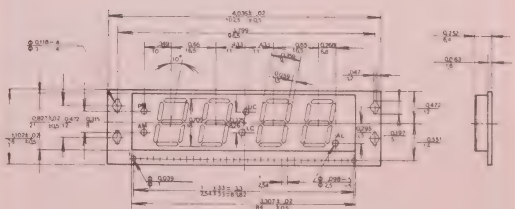

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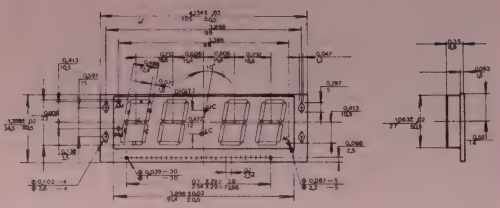
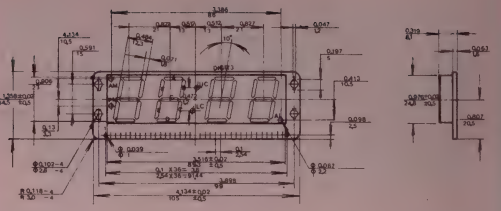


41

D.LTC-937A



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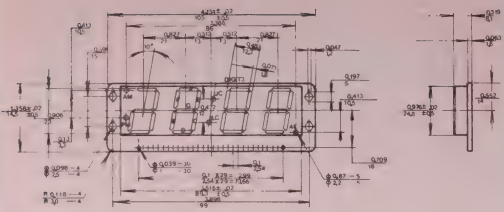

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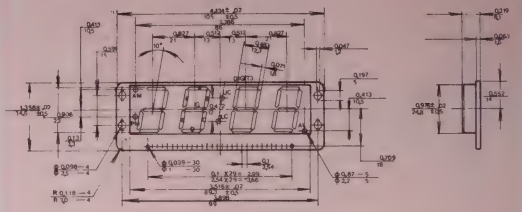
E.LTC-967S



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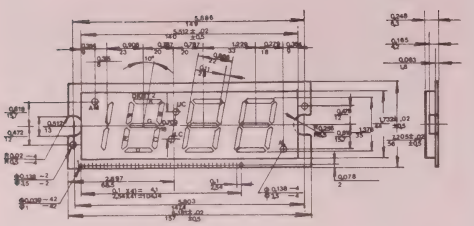

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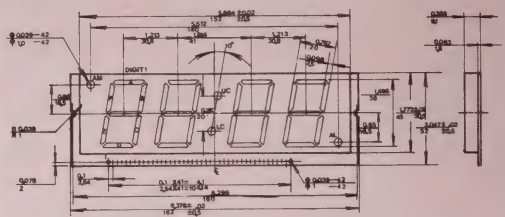

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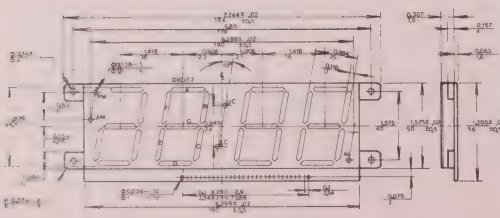

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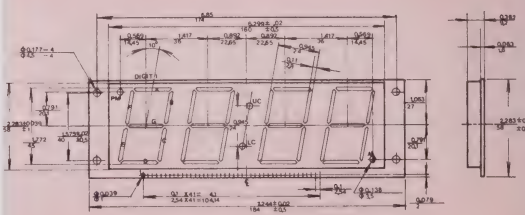

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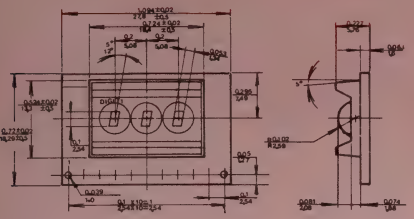

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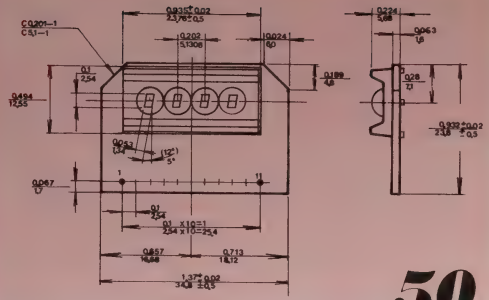

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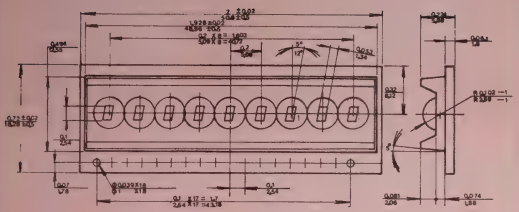

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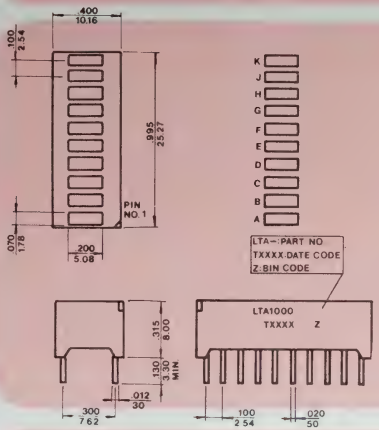

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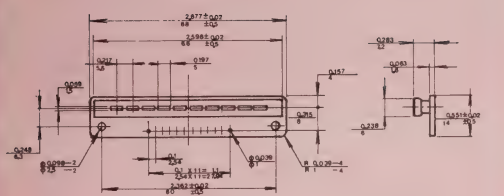

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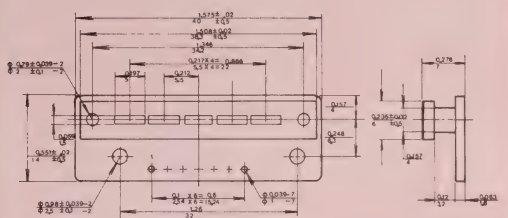
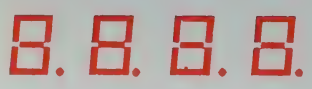
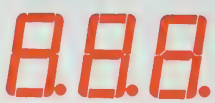
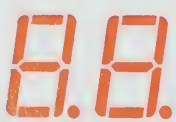


54

LED Numeric Displays with Driver IC Built-in

Actual Digit Size	Part Number	Color	Device Pin Out								
0.3"  Air Type	LTM8328P LTM8328KP	Bright Red Bright Red	1	2	3	4	5	6	7	8	9
			Bit 33	Bit 34	DE	D_I	C_K	V_{DD}	B_C	V_{SS}	V_{LED}
0.54"  Encap Type	LTM8494AR LTM8494AP LTM8494AG LTM8494AE LTM8494AHR	Red Bright Red Green Orange Hi. Eff. Red	1	2	3	4	5	6	7	8	9
			Bit 32	Bit 33	Bit 34	D_I	C_K	D_E	V_{DD}	V_{LED}	B_C
			10	11	12	13	14	15	16	17	18
			N.P.	N.P.	N.P.	V_{SS}	V_{SS}	Bit 29	Bit 30	Bit 31	N.P.
0.56"  Encap Type	LTM8522R LTM8522P LTM-8522G LTM8522E LTM8522HR	Red Bright Red Green Orange Hi. Eff. Red	1	2	3	4	5	6	7	8	9
			V_{SS}	V_{LED}	V_{LED}	Bit 25	Bit 26	Bit 27	Bit 28	Bit 29	Bit 30
			10	11	12	13	14	15	16	17	18
			Bit 31	Bit 32	Bit 33	Bit 34	D_E	D_I	C_K	V_{DD}	B_C
0.56"  Encap Type	LTM8529R LTM8529P LTM8529G LTM8529E LTM8529HR	Red Bright Red Green Orange Hi. Eff. Red	1	2	3	4	5	6	7	8	9
			V_{SS}	V_{LED}	N.P.	N.P.	N.P.	Bit 15	Bit 16	Bit 17	Bit 18
			10	11	12	13	14	15	16	17	18
			Bit 19	Bit 20	Bit 21	Bit 22	D_E	D_I	C_K	V_{DD}	B_C
0.56"  Encap Type	LTM8530R LTM8530P LTM8530G LTM8530E LTM8530HR	Red Bright Red Green Orange Hi. Eff. Red	1	2	3	4	5	6	7	8	9
			V_{SS}	V_{LED}	N.P.	N.P.	N.P.	Bit 17	Bit 18	Bit 19	Bit 20
			10	11	12	13	14	15	16	17	18
			Bit 21	Bit 22	Bit 23	Bit 24	D_E	D_I	C_K	V_{DD}	B_C

NOTE:

1. D_I: Data Input
2. C_K: Clock Input
3. D_E: Data Enable
4. B_C: Brightness Control

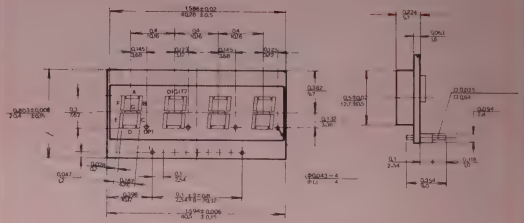
5450 IC Output Connection																	Package Dimension
Bit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	1
Seg.	1a	1b	1c	1d	1e	1f	1g	1dp	2a	2b	2c	2d	2e	2f	2g	2dp	3a	
Bit	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
Seg.	3b	3c	3d	3e	3f	3g	3dp	4a	4b	4c	4d	4e	4f	4g	4dp	P1	P2	
Bit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	2
Seg.	2a	2b	2c	2d	2e	2f	2g	2h	2k	2m	2n	2r	2s	2t	1a	1b	1c	
Bit	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
Seg.	1d	1e	1f	1g	1h	1k	1m	1n	1r	1s	1t	P15	P16	P17	P1	P2	P3	
Bit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	3
Seg.	1a	1b	1c	1d	1e	1f	1g	1dp	2a	2b	2c	2d	2e	2f	2g	2dp	3a	
Bit	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
Seg.	3b	3c	3d	3e	3f	3g	3dp	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	
Bit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	4
Seg.	1b	1c	1g	1h	1j	1dp	2a	2b	2c	2d	2e	2f	2g	2dp	P6	P7	P8	
Bit	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
Seg.	P9	P10	P11	P12	P13													
Bit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	5
Seg.	1a	1b	1c	1d	1e	1f	1g	1dp	2a	2b	2c	2d	2e	2f	2g	2dp	P6	
Bit	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
Seg.	P7	P8	P9	P10	P11	P12	P13											

NOTE: 1. 2a (e.g.) First digit refer to digit number, second letter is segment
2. P2 is device pin out number 2.

Package Dimensions

Notes:

1. All Dimensions Are In Millimeters Tolerance Is (0.25mm) Unless Otherwise Noted.
2. Specifications Subject To Change Without Notice.



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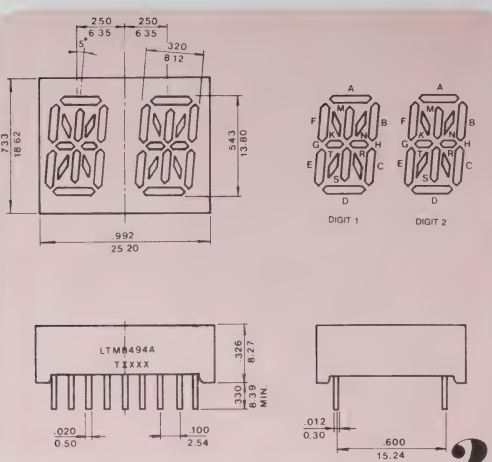

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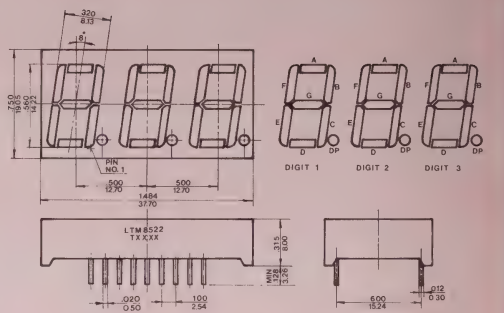

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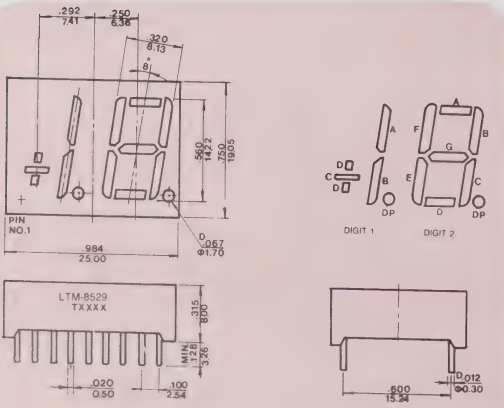

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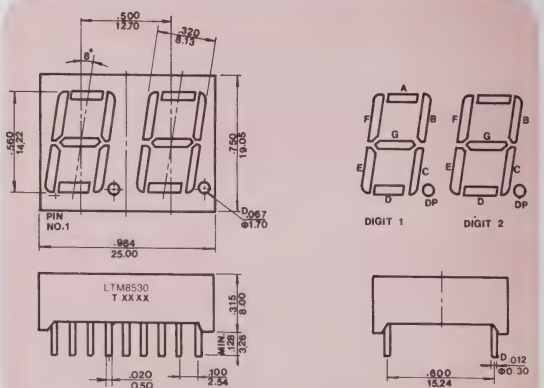

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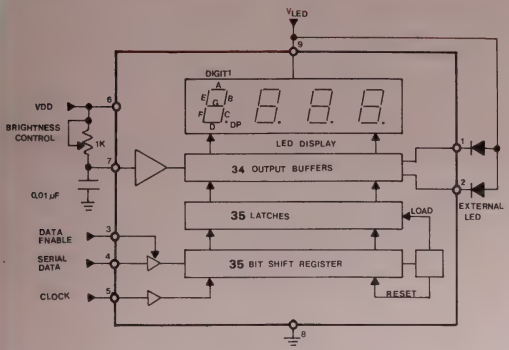


FIGURE 1 Block Diagram

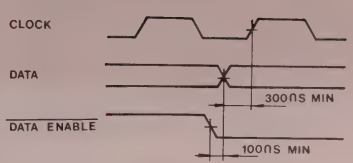


FIGURE 2 Timing relationship.

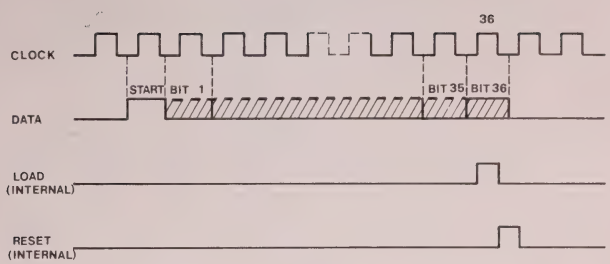


FIGURE 3 Input data format.

Integral Displays

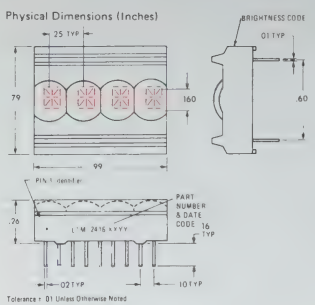
LTM 1416 and LTM 2416
ALPHANUMERIC DISPLAYS with I.C. DRIVER

Features:

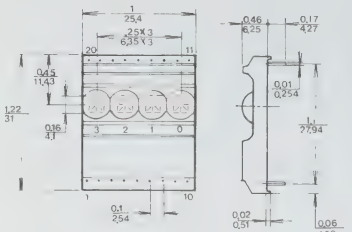
- End stackable
- μP bus compatible
- TTL compatible
- 64 character ASCII format
- On board memory, decode, mix, drive
- Totally encapsulated package
- Independent and asynchronous digit access
- Ultra-fast access time—300 ns
- Parallel Entry
- **Memory Clear Function (with LTM 2416)**
- **Display Blank Function (with LTM 2416)**

Applications

- Hand held terminals
- Telecommunication
- Instrumentations
- Minicomputers
- Word Processors



	Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
LTM2416	V_{CC}			4.5	5.5		V
	I_{CC}		(VCC=5.0) All segs. on		75		mA
	I_{CC}		(VCC=5.0) Eight seg./dig.		40	100	mA
	I_{CC}		(VCC=5.0) Display blank		0.6		mA
	V_{IL}		(VCC=5.0)			0.4	V
	V_{IH}		(VCC=5.0)	2.4			V
	I_{IL}		(VCC=5.0)		35	125	μA
	t_W	Write Pulse	VCC=5.0V	240			ns
	t_{DS}	Data Set-up Time	VCC=5.0V	100			ns
	t_{DH}	Data Hold Time	VCC=5.0V	50			ns
	t_{AS}	Address Set-up Time	VCC=5.0V	500			ns
	t_{AH}	Address Hold Time	VCC=5.0V	0			ns
	Segment Luminous Intensity		VCC=5.0V		0.5		mcd
	Intensity Matching, Within A Digit		VCC=5.0V		±33		%
	Off-Axis Viewing Angle		VCC=5.0V		±50		degrees
	Digit Size				160		mils.
	Special Peak Wavelength		VCC=5.0V		660		nm
	Special Width Half Intensity		VCC=5.0V		40		nm

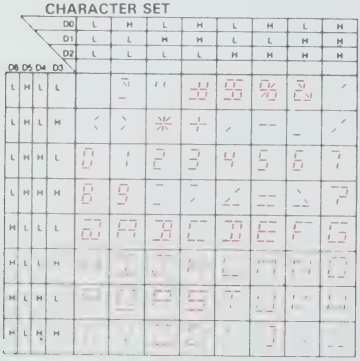


LTM1416

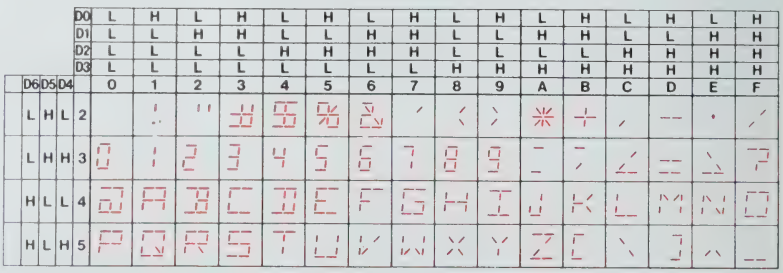
Data is the same as for the LTM-2416 except the off-axis viewing angle is ± 20° and t_{AS} = 300 nS

TOLERANCE±.01 UNLESS OTHERWISE NOTED

LTM-1416
CHARACTER SET



LTM-2416
CHARACTER SET



DESCRIPTION

The LTM 2416 is a four digit display module having 17 segments plus decimal and a built-in CMOS integrated circuit.

The integrated circuit contains memory, ASCII ROM decoder, multiplexing circuitry, and drivers. Data entry is asychronous and can be random. A display system can be built using any number of LTM 2416's since each digit of any LTM 2416 can be addressed independently and will continue to display the character last stored until replaced by another.

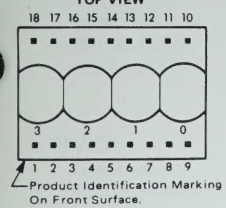
System interconnection is vry straightforward. The least significant two address bits (A_0, A_1) are normally connected to the like named inputs of all LTM 2416's in the system. With two chip enables ($\overline{CE1}$, and $\overline{CE2}$) four LTM 2416's (16 characters) can easily be interconnected without a decoder.

Alternatively, one-of-n decoder IC's can be used to extend the address for large displays.

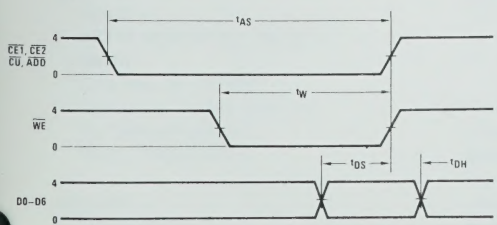
Data lines are connected to all LTM 2416's directly and in parallel, as is the write line (WR). The display will then behave as a write-only memory.

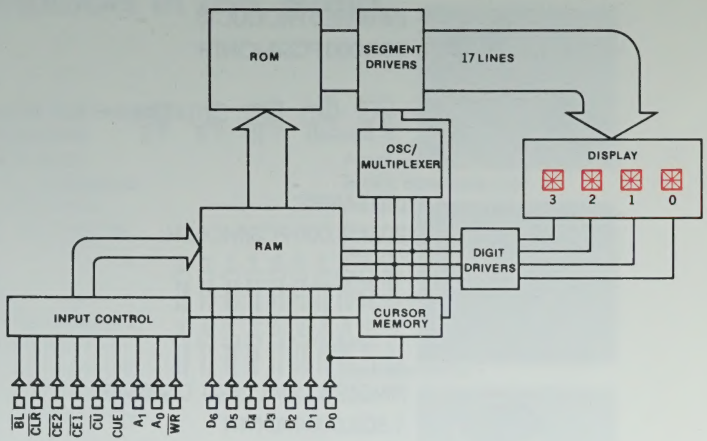
The cursor function causes all segments of a digit position to illuminate. The cursor is not a character, however, and upon removal the previously displayed character will reapear.

Specifications are subject to change without notice.



Pin	Function	Pin	Function
1	$\overline{CE1}$ Chip Enable	10	Gnd
2	$\overline{CE2}$ Chip Enable	11	D0 Data Input
3	$\overline{CLR}$ Clear	12	D1 Data Input
4	CUE Cursor Enable	13	D2 Data Input
5	$\overline{CU}$ Cursor Select	14	D3 Data Input
6	$\overline{WR}$ Write	15	D6 Data Input
7	A1 Digit Select	16	D5 Data Input
8	A0 Digit Select	17	D4 Data Input
9	V_{CC}	18	$\overline{BL}$ Display Blank





Internal Block Diagram

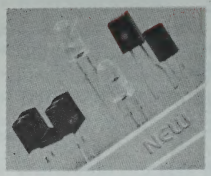
TABLE I. DATA AND CURSOR ENTRY FUNCTION EXAMPLE

Assume initially D6 = 1 and D5 – D0 = 0 for all internal digit memories. Cursor memory is cleared. Table is intended to be read in sequence.

	BL	CE1	CE2	CUE	CU	WR	CLR	A1 A0	D6	D5	D4	D3	D2	D1	D0	DIG 3	DIG 2	DIG 1	DIG 0
DATA ENTRY FUNCTION	0	X	X	X	X	X	1	X X	X	X	X	X	X	X	X				
	1	1	0	X	X	X	1	X X	X	X	X	X	X	X	X				
	1	0	1	X	X	X	1	X X	X	X	X	X	X	X	X				
	1	0	0	X	X	1	1	X X	X	X	X	X	X	X	X				
	1	0	0	X	1	0	1	0 0	1	0	0	0	1	1	1				
	1	0	0	X	1	0	1	1 0	0	1	1	0	1	0	0				
	X	X	X	X	X	X	0	X X	X	X	X	X	X	X	X				
	1	0	0	X	1	0	1	0 0	1	0	0	0	0	0	1				
	1	0	0	X	1	0	1	0 1	1	0	0	0	0	1	0				
	1	0	0	X	1	0	1	1 0	1	0	0	0	0	1	1				
	1	0	0	X	1	0	1	1 1	1	0	0	0	1	0	0				
CURSOR ENTRY FUNCTION	1	0	0	1	0	0	1	0 0	X	X	X	X	X	X	1				
	1	0	0	1	0	0	1	0 1	X	X	X	X	X	X	1				
	1	0	0	1	0	0	1	1 1	X	X	X	X	X	X	1				
	1	0	0	1	0	0	1	1 0	X	X	X	X	X	X	1				
	1	X	X	0	1	1	1	X X	X	X	X	X	X	X	X				
	1	X	X	1	1	1	1	X X	X	X	X	X	X	X	X				
	1	0	0	1	0	0	1	0 0	X	X	X	X	X	X	0				
	1	0	0	0	0	0	1	1 0	X	X	X	X	X	X	0				
	1	X	X	1	1	1	1	X X	X	X	X	X	X	X	X				
	0	X	X	X	1	1	1	X X	X	X	X	X	X	X	X				
	1	X	X	1	1	1	1	X X	X	X	X	X	X	X	X				
	1	X	X	1	1	X	0	X X	X	X	X	X	X	X	X				
	1	0	0	1	0	0	1	1 1	X	X	X	X	X	X	0				
	1	0	0	1	0	0	1	0 1	X	X	X	X	X	X	0				

X = don't care

Liton's Products & Capacity



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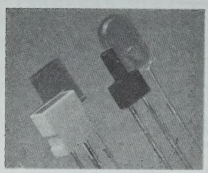
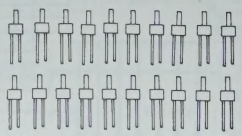
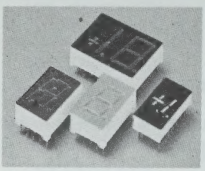
500,000 PCS/MONTH



LED LAMPS
20,000,000 PCS/MONTH





SINGLE & DUAL DIGIT DISPLAYS
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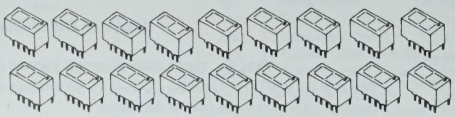

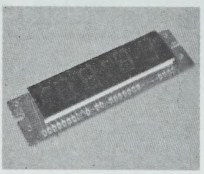

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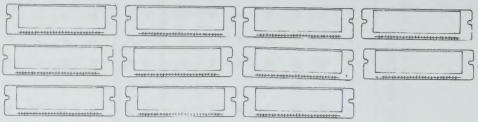

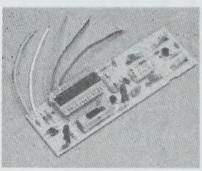

CLOCK MODULES
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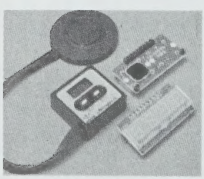

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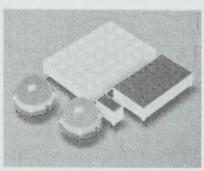

SPECIAL DISPLAYS
200,000 PCS/MONTH

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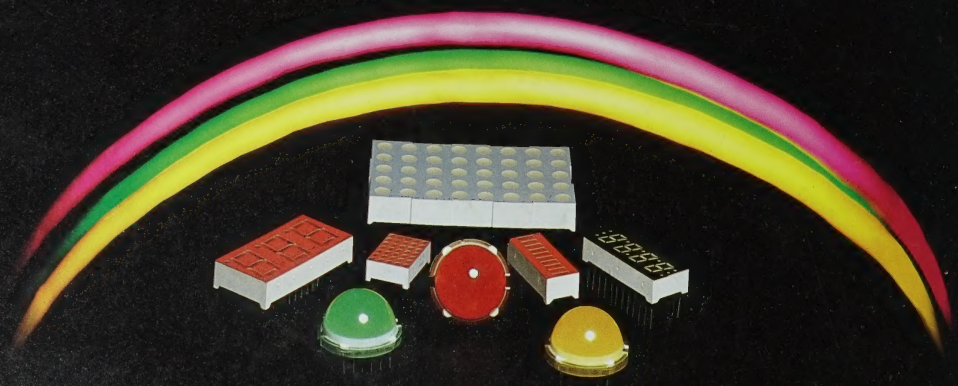

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